

Bridging the Gap with Tucson's Urban Fissure

Ethan Yuri Rapp







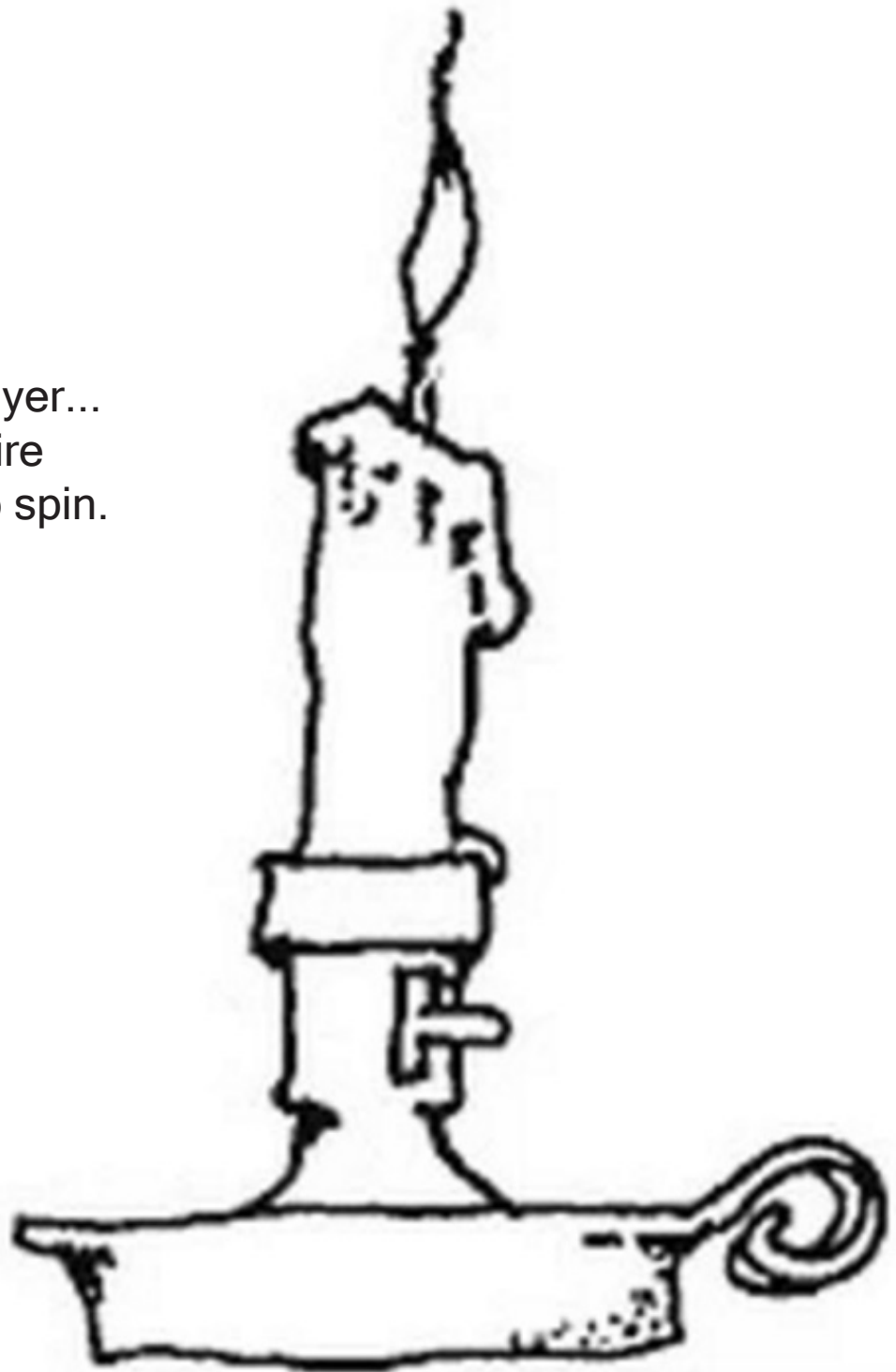
DEDICATION

I dedicate this masters report to my loving family.
I would not be here without your support and
unconditional love. You have made all my dreams come
true.

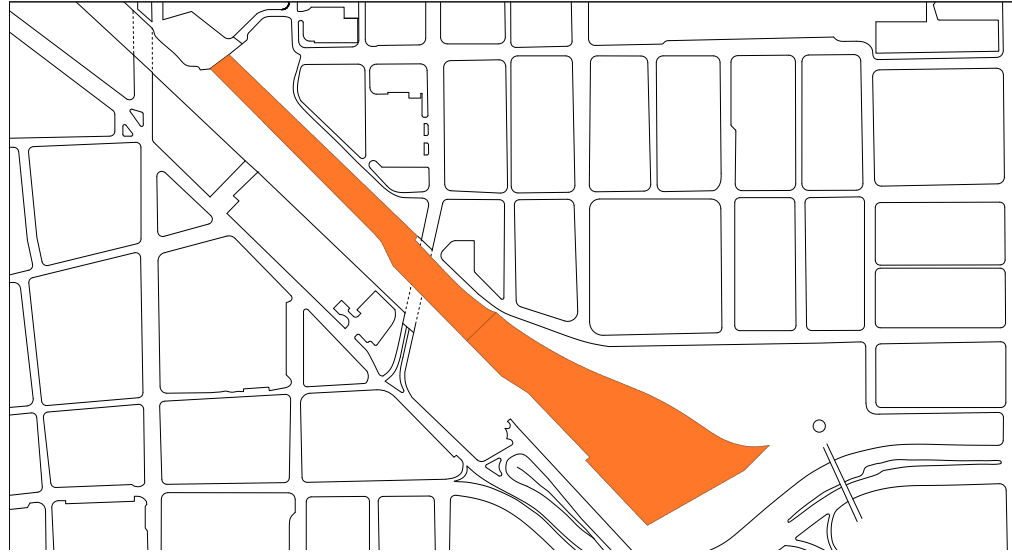
Thank You!

INVITATION

If you are a dreamer, come in,
If you are a dreamer, a wisher, a liar,
A hope-er, a pray-er, a magic bean buyer...
If you're a pretender, come sit by my fire
For we have some flax-golden tales to spin.
Come in!
Come In!



Bridging the Gap with Tucson's Urban Fissure



By Ethan Yuri Rapp

A Masters Report Submitted to the Faculty of the
College of Architecture, Planning, and Landscape Architecture

In Partial Fulfillment of the Requirements for the Degree of
MASTER OF LANDSCAPE ARCHITECTURE

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College of Architecture, Planning
& Landscape Architecture



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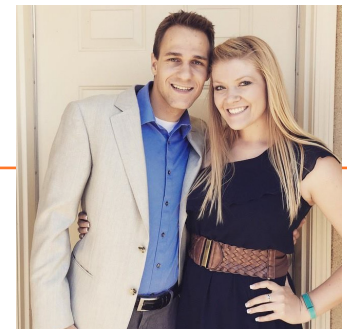
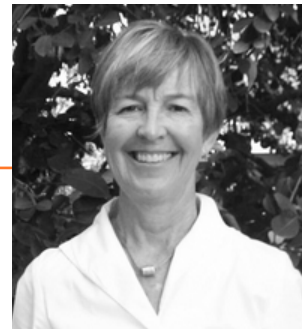
THROUGHOUT MY TIME IN THIS PROGRAM I HAVE ENCOUNTERED MANY TRIALS THAT HAVE TESTED ME MENTALLY AND PHYSICALLY. I COULD NOT HAVE COMPLETED THIS PIECE OF WORK WITH OUT THE INSPIRATION OF, FIRST AND FOREMOST, MY FAMILY. I GIVE THE HIGHEST AMOUNT OF PRAISE, LOVE, AND THANKS FOR MY LOVING MOTHER CAROL, MY FATHER WARREN, AND MY SISTER KELSEY. THANK YOU AND I LOVE YOU.

ANOTHER IMPORTANT THANK YOU IS EXTENDED TO THE LAURI JOHNSON (DIRECTOR). FROM THE BEGINNING YOU OPENED THE GATES AND ALLOWED ME TO TAKE THE STEPS INTO A NEW REALM. YOU SAW POTENTIAL AND EMPOWERED ME TO OPEN MY EYES AND IMMERSE MYSELF INTO A NEW BEAUTIFUL PART OF THE WORLD. THANK YOU.

I WANT TO ALSO GIVE THANKS FOR MY COMMITTEE MEMBERS, DR. ARLIE ADKINS, AND DR. MARGARET LIVINGSTON (COMMITTEE CHAIR). THIS PROJECT WOULD HAVE NEVER CAME INTO FULL FOCUS WITH OUT THEIR HELPFUL INSIGHTS AND GUIDANCE. I GIVE SPECIAL THANKS TO DR. MARGARET LIVINGSTON FOR HER PATIENCE THROUGH MY STUBBORN MOMENTS, AND FRUSTRATING QUESTIONS. THANK YOU.

TO MY FELLOW CLASSMATES, WHO HAVE SEEN ME STRUGGLE AND SUCCEED, THANK YOU. WITH OUT YOU BY MY SIDE, MY TIME IN THIS PROGRAM WOULD HAVE BEEN VACUOUS. INSTEAD YOU ALLOWED ME TO COMPETE, LEARN, AND GROW AS A STUDENT, AS A DESIGNER, AND AS A FUTURE PROFESSIONAL IN A VIVACIOUS ENVIRONMENT.

FINALLY, I WOULD LIKE TO SAY THANKS TO MY BEST FRIEND, ALLISON DUNN, FOR STICKING IT OUT WITH ME AND ENCOURAGING ME TO DO MY BEST, EVEN WHEN TIMES WERE TOUGH AND SEEMINGLY NEVER ENDING. I COULD NOT HAVE DONE THIS WITH OUT YOU. AGAIN, THANK YOU.



• ABSTRACT •



As cities continue to develop, they can experience changes and subsequent decline in particular industries and land uses. In some cases, structures are abandoned and vacant lots remain as remnants of past uses. In central Tucson, Arizona, there is a fragment of land that separates two important districts. The proposed site, *Tucson's Urban Fissure*, can be viewed as a landscape that is underutilized, barren, scorched, and is in need of a new identity. To the north of the Urban Fissure, sits an avenue of shops and restaurants that are well established, and to the south a newly built, thriving, living, urban hub. This fissure provides an opportunity to help fuse these districts. This area has the potential to link two thriving urban nodes: Fourth Avenue and Downtown Tucson. Currently this, Urban Fissure has a set of historic train tracks running along its side. This cultural inspiration along with Iron Horse Park can be looked at as a set of catalysts that can help spur a new sense of identity for this site.

Through the creation of an urban park on Tucson's Urban Fissure, the author will provide the city of Tucson with a valuable addition to its urban fabric. Through special attention to spatial scale, circulation, shelter and refuge areas, and spatio-temporal landscape patterns, the design will realize a new image for the cavity that currently sits in between central Tucson Arizona's most heavily used districts (4th Avenue and Downtown), while also activating the underutilized land. This work is intended to illustrate to the city how the sense of movement can bridge the gap in needed linkages within the urban fabric of Tucson.

- Urban Infill
- Linear Park
- Linkages
- Movement
- Large Scale Art
- Natural Vegetation
- Cultural/ Historical Connection
- URBAN FISSURE



The underutilized study site (Urban Fissure), located in central Tucson Arizona, is yearning for discovery and experience. It is situated between two districts that are in a constant state of movement, which has given the city positive images for their public.

Today the union pacific railroad that traverses the city of Tucson paints an image for the city and a city park could accompany that image. The tracks also play an important role in tying together history, culture, and instilling a sense of movement for this urban fissure. These sets of tracks remind us of our cities history. They bring us back to a simpler time, when culture was focused around the ideas of movement, unity, and cohesion.



This cultural inspiration along with Iron Horse Park can be regarded at as a set of catalysts that can help spur a new sense of identity for Tucson's Urban Fissure. Having a deep understanding of movement and how it affects our site will be crucial to understanding how to program the new site. Taking a short glimpse into our past we will be able to understand how a set of railroad tracks will set a positive image for our new site. It will allow us to speculate on how we design parks for people focused around the ideas and theories of movement, as well as, allow this sense of movement to transform the urban fissure into an area of the city, which will fundamentally belong to everybody.

The overall goal of this report is to give an accurate detailed account for existing conditions and through rigorous analysis procure a master plan for this Urban Fissure that emphasizes movement to bring about life to an area at all hours of the day, while simultaneously filling the gap between multiple cultural and historic districts.

INTRODUCTION



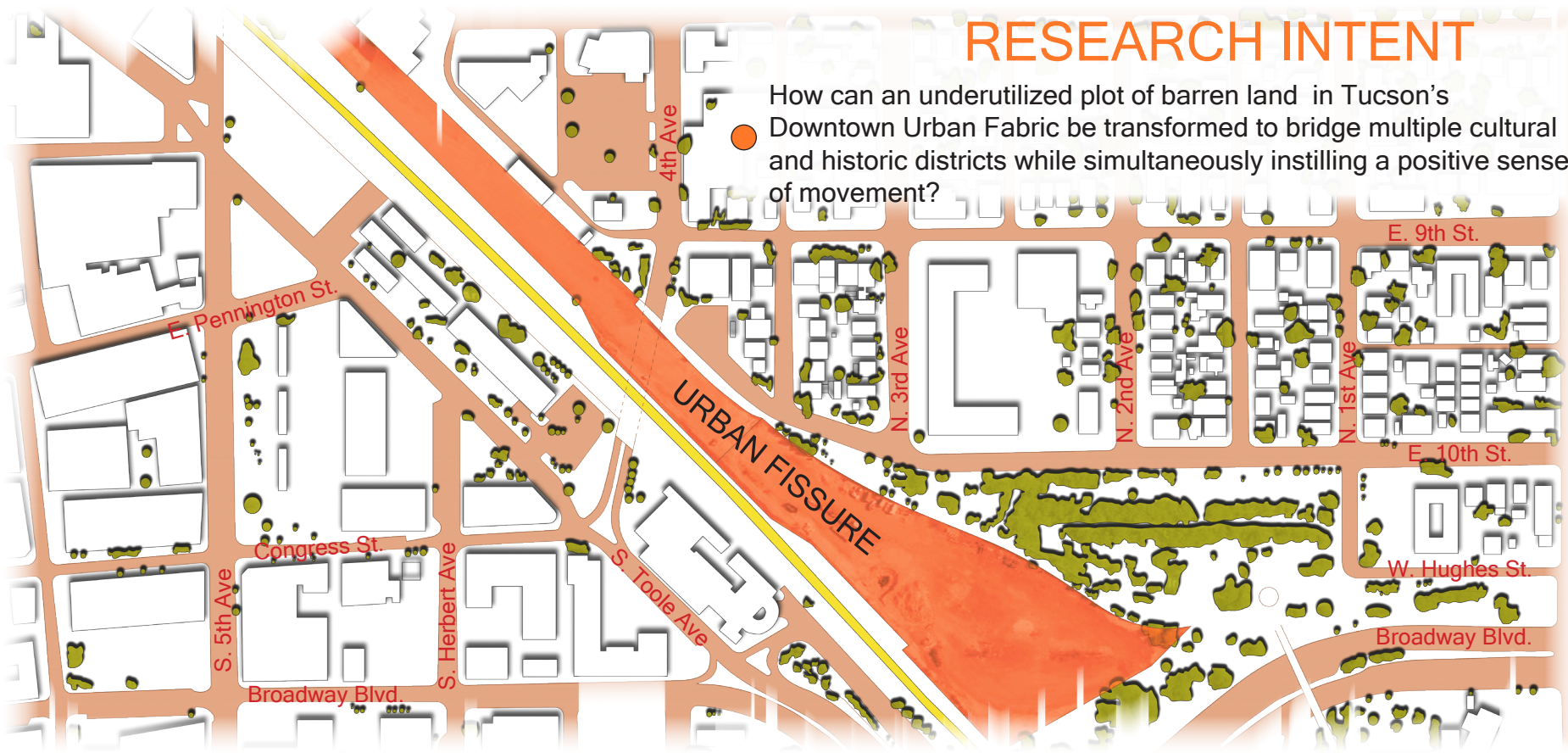
OVERVIEW

- Fusing of two districts
- Understanding Current Movement
- City as a Design Catalyst
- Bridge the Gap with an Urban Park



RESEARCH INTENT

How can an underutilized plot of barren land in Tucson's Downtown Urban Fabric be transformed to bridge multiple cultural and historic districts while simultaneously instilling a positive sense of movement?



GOALS

- Give an accurate detailed account for existing conditions.
- Explore ways to tie together a set of historic train tracks and Iron Horse Park within the Urban Fissure
- Instill a sense of movement.
- Bridge a gap between multiple cultural and historic districts.

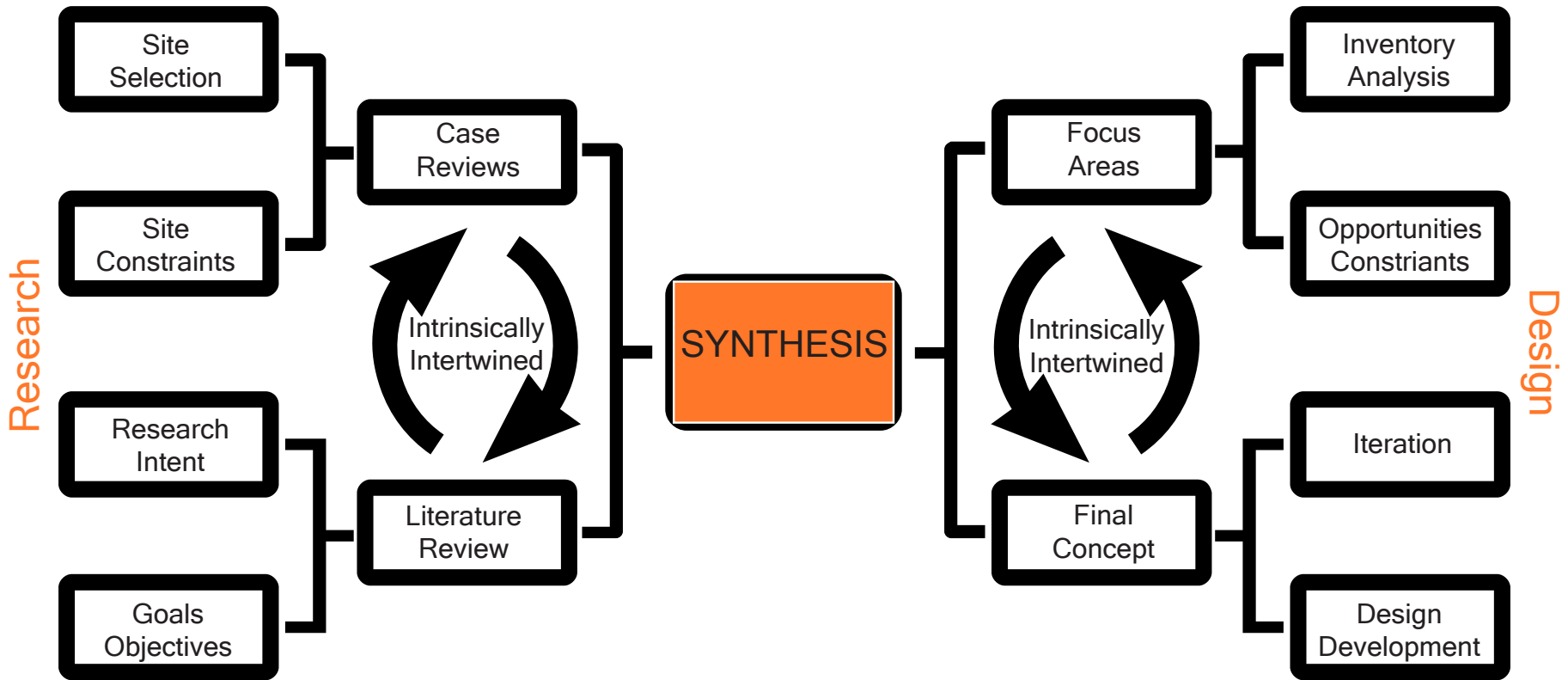
OBJECTIVES

- Use Train Tracks and Iron Horse Park as Catalysts for design
- Create a place that embraces biodiversity
- Healthy Design Principles
- Create a higher sense of social cohesion

OUTCOMES

- Pedestrian Walkways, Bike Paths, Interaction Nodes,
- Create buffers for habitat biodiversity, while celebrating existing cultural interventions
- Create City Viewing areas through architectural interventions.
- Use materials that engage people with their environment.
- Glue both historic and cultural districts with an Urban Park.

DESIGN PROCESS



The Design Process is a streamlined formula that incorporates methods, analysis, and goals to help one arrive at a synthesis for a solution to a defined problem statement. The process also helps us identify a problem, define its constraints through literature and case reviews, and through inventory, analysis, and iteration find a way to implement specific strategies synthesized through research and design. It is important to know that Case Reviews and Literature Review on the Research side of the equation are intrinsically intertwined because they can ultimately inform each other. The same goes for the Focus Areas and Final Concept on the Design side of this equation. They can inform us on many different levels depending on how we choose to interpret the prior steps of the process.

LITERATURE REVIEW



4th Avenue, Tucson Arizona:
(north of site)



Downtown, Tucson Arizona:
(south of site)

Sense of Movement



Man-made Vectors

OVERVIEW

- History of Surroundings
- Typology of Movement
- Synthesized Movement
- Urban Parks

Biological Vectors

Natural Vector

Synthesized Movement:
Landscape

Urban Parks

The overarching goal of this literature review is **to familiarize ourselves** with the surrounding context of the site. We must also **take into account** the different types of movement that has helped shape the area as it exists currently and lastly, **take a glimpse** at how a new urban park will help synthesize the different movement types within the Urban Fissure.

HISTORY OF SURROUNDINGS

Fourth Avenue located north of the site has a long history of cultural service to the city of Tucson. Formed in 1974 Fourth Avenue Merchants Association (FAMA) is included of member merchants from the **Fourth Avenue Historic Shopping Districts**.

This organization's goal is committed to the **growth and prosperity of over 100 stores and services**. Contributing to industries in clothing, furniture, books, artwork, food, and drink. During both, day and night 4th Avenue historic shopping district is utilized by the entire city of Tucson.(FAMA).

Fairs are events much bigger in scale than bicycle shops or small cafés, providing a venue for the whole community. The City of Tucson benefits upwards to 70,000 dollars as well as provide 2000 hours of labor during the two street fairs.

Downtowns in the past half-century have changed time and time again. The introduction of the freeway system and subsequent growth of peripheral communities **transformed the ways in which people live, work and play**. With improved transportation routes, people found it easier to travel longer distances to work or shop.

People left their downtowns and neglected buildings, boarded-up storefronts and empty, trash-strewn streets gradually reinforced the public's perception that nothing was happening downtown, that nothing was worth saving there.

People forgot how important their downtown and its historic commercial buildings were in reflecting their community's unique heritage"(Downtown Tucson.org).

"In order to follow the "one mile rule" established by the Southern Pacific Railroad, numerous railroad employees lived in this district in order to hear the whistle blow, calling them to work.

Developed beginning in 1890, this neighborhood presents a mix of building styles, including Sonoran, American Territorial, Craftsman Bungalow, and Queen Anne Revival. Foundation stones of basalt on numerous residences were gathered locally from Sentinel Peak ('A' Mountain). 180 historic properties, including the Josias Joesler-designed Don Martin Apartments (1929) and Roy Place's Coronado Hotel (1928), add to the charm of this neighborhood, **noted as the "most walkable in Tucson"** thanks to bike and walking paths and its proximity to cafes, restaurants, and shops on North Fourth Avenue and downtown" (Tucson.gov).

4th Avenue



Rean Photography

Downtown



Downtown Partnership

Iron Horse



Tucson AZ Word Press

Albert Einstein once told the world that, “Nothing happens until something moves”(Brainyquotes.com). When speaking in terms of architectural movement in landscapes, we see many ways that movement can take shape. The vectors attributed to architectural movement can help us learn to instill that sense of movement when taking a synthesized approach to programming a site. Movement can be experienced at many scales. We can start to look at it in a fourfold pattern.

Man made movement, biological movement, natural movement, and synthesized movement. The type of movement we must try to understand, in our case, is how we can synthesize the first three approaches to understanding architectural movement. It is important to know that each type of movement that will be discussed always happens in or through some sort of medium. These mediums are areas or constants that are always present and must therefore facilitate movement. We will take a look at how these vectors are ingrained in our every day life and arise with a way to synthesize our approach to design. We will see that Landscapes are what keep us glued to the cities we live in.



The image above depicts synthesized movement throughout the city of Tucson. We can see manmade movement vector, a biological movement vector, and a natural vector, which, when all combined, give us a much better picture of how urban movement takes place.

Fourth Avenue located north of the site has a long history of cultural service to the city of Tucson. Formed in 1974 Fourth Avenue Merchants Association (FAMA) is included of member merchants from the Fourth Avenue Historic Shopping Districts (the area between 9th Street; University Boulevard; 5th Avenue; and 3rd Avenue)(www.fourthavenue.org). This organization's goal is committed to the growth and prosperity of over 100 stores and services. Contributing to industries in clothing, furniture, books, artwork, food, and drink. During both, day and night 4th Avenue historic shopping district is utilized by the entire city of Tucson. FAMA also fosters programs of a civic, social, cultural or artistic nature that are intended in the growth of function and aesthetic values of the community(www.fourthavenue.org).

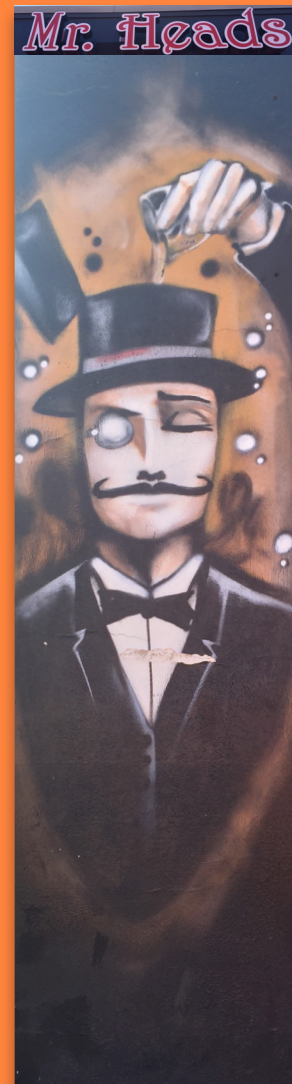


4th AVENUE

FourthAvenue.org

Fairs are events much bigger in scale than bicycle shops or small cafés, providing a venue for the whole community. The City of Tucson benefits upwards to 70,000 dollars as well as provide 2000 hours of labor during the two street fairs. As we begin to move further south and away from Tucson's 4th Avenue shopping district we first traverse the urban fissure. This site is currently underutilized, barren, and without any sense of movement.

4th Avenue Merchants District (North of Site)



Downtown Tucson (South of Site)



Downtowns in the past half-century have changed time and time again. The introduction of the freeway system and subsequent growth of peripheral communities transformed the ways in which people live, work and play. With improved transportation routes, people found it easier to travel longer distances to work or shop. People left their downtowns and neglected buildings, boarded-up storefronts and empty, trash-strewn streets gradually reinforced the public's perception that nothing was happening downtown, that nothing was worth saving there. People forgot how important their downtown and its historic commercial buildings were in reflecting their community's unique heritage"(DowntownTucson.org).



The arrival of the Southern Pacific Railroad in 1880 spurred a new hope for Tucson's downtown district and it was further strengthened with the appearance of the University of Arizona in 1885 and more so solidified during the postwar years of WWII.



Today, we see a trend of people moving back to their downtowns and as the demand for housing continues, we must continue to find new and innovative ways to bring in people to Tucson's downtown districts. Tucson's downtown partnership focuses on its activities and expenditures through the help of its Board of Directors, which is comprised of downtown property owners, businesses, non-profit organizations, arts, cultural and historical organizations, and it's many neighborhood leaders. Jan Cervelli, the chair of the Downtown Tucson Partnership, describes the mission of the partnership as, "a commitment to making Downtown Tucson the most dynamic urban center in the Southwest" (DowntownTucson.org). This is the type of movement we must encourage. When entering our Urban Fissure we feel no sense of movement, we stand utterly alone and without any way to identify with the site. Therefore we must step into stride and try to understand what it is that is desirable about movement.

TYOLOGY OF MOVEMENT

Man-made

Biological

Natural

Synthesized

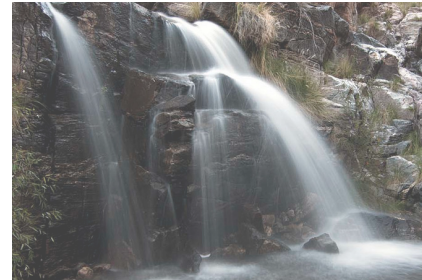
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The type of movement we must try to understand, in our case, is how we can synthesize the first three approaches to understanding architectural movement. It is important to know that each type of movement that will be discussed always happens in or through some sort of medium. These mediums are areas or constants that are always present and must therefore facilitate movement.



Tucson is known for being a very car-centric city. Of the man made vectors, the automobile is arguably the most important and plays a bigger role in peoples everyday lives. From early morning to late evening we are dependent on the vehicle for travel. From work, to school, and back to home again, cars allow us to traverse extremely large areas and at many variable speeds. As the development of cars and modern transportation evolves, so does the city.

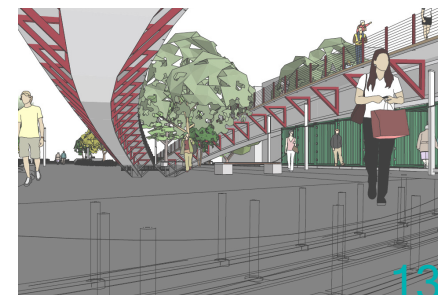
In ancient times people and landscapes were intrinsically intertwined. People moved through out the landscape for much more practical reasons than they do today. Marsh points out that the, "ancients' interest in environmental planning was purely practical, having to do with things like trade, food supplies, water, and defense with little or no regard for what we would call environmental impact"(Marsh, 14). People are perhaps an entity that can either save or destroy our landscapes.

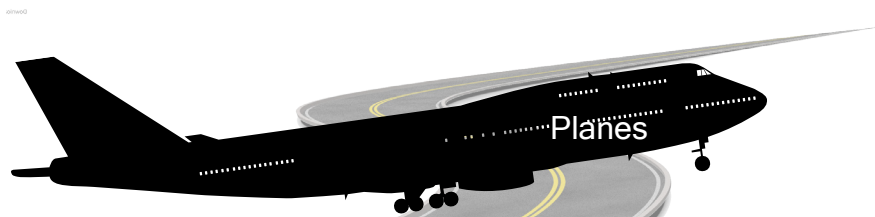


Natural movement can be described as something that transcends just the physical realm of movement. It is ingrained in the landscape and perceived through our senses.

Throughout history people have been gravitating towards understanding natural landscape processes, but falling short much of the time. It is inevitable that as we continue to build and restructure our environments that we will take away from the landscape, it is our goal to prolong the access to our most valuable resource: water.

After learning about the many types of vectors that are attributed to movement we notice that everything comes together in a unified realm and we perceive it as a whole entity through the lens of time. When looking at all the vector types simultaneously we start to see a much clearer picture of how an urban landscape starts to behave. But to fully understand landscape movement we must try to envision ourselves in an area specific to our site.





Planes

The Wright brothers officially became the first team to fly an airplane with a pilot in December, 1903. The first flight lasted for 12 seconds and was a distance of 123 feet. This was one of three flights that were successful for the brothers that day. The longest one was piloted by Wilbur and he flew for 892 feet and remained in the air for 59 seconds.

FirstFlightCentennial.org



Trains

The "Golden Age" of railroading lasted from roughly the 1880s to the 1920s before other modes of transportation (such as automobiles and airplanes) began to displace the industry as the leading means of moving people and goods. Railroads faced their toughest adversity during the 1960s and 1970s when it lost so much market share that many companies were either purchased by stronger ones or simply went bankrupt. After the industry was deregulated in 1980 it began to make a comeback and today is seeing a renaissance.

American-Rails.com/railroad-history

Manmade Vectors:

These types of vectors are ones that are not natural, but built by humans. Trains, cars, airplanes are all part of our modes of movement throughout the city. The mediums, which help facilitate these types of movement, tracks, roads, highways, sky, are just as important as the vectors themselves.



Automobiles

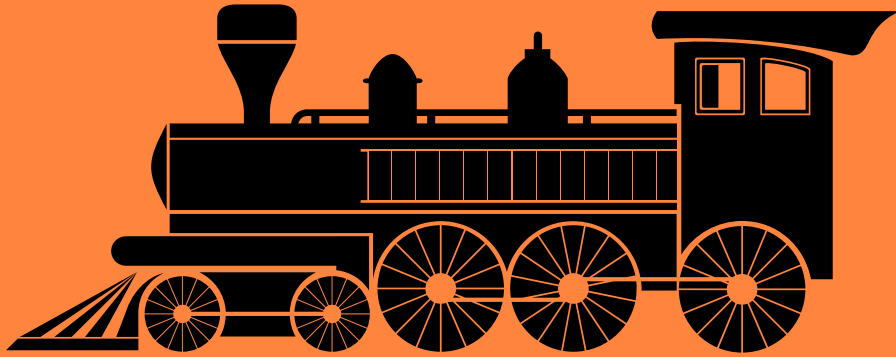
Perhaps no invention affected American everyday life in the 20th century more than the automobile.

Although the technology for the automobile existed in the 19th century, it took Henry Ford to make the useful gadget accessible to the American public. Ford used the idea of the assembly line for automobile manufacturing. He paid his workers an unprecedented \$5 a day when most laborers were bringing home two, hoping that it would increase their productivity.

By 1920, there were over 8 million registrations. The 1920s saw tremendous growth in automobile ownership, with the number of registered drivers almost tripling to 23 million by the end of the decade.

USHistory.org

Trains



Trains for instance play a big role in our history of movement. For Tucson the Union Pacific Railroad offered a new way of life in the late 1800's. It meant new goods and services for the city, as well as helped accrue many jobs for the people of Tucson. The rail was also a way to allow the commute from place to place become one or less days as opposed to multiple and it allowed our city to grow.

The tracks are a constant reminder of how our city grew, but it is our responsibility to understand that without this vector Tucson would be a very different city. Today, Tucson is Union Pacific's principal terminal in Arizona. It includes a yard, and mechanical and locomotive maintenance facilities (azpm.org). The railroad's diversified business mix includes agricultural Products, Automotive, Chemicals, Coal, Industrial Products and Inter-modal. Union Pacific serves many of the fastest growing U.S. population centers, operates from all major West Coast and Gulf Coast ports to eastern gateways, connects with Canada's rail systems and is the only railroad serving all six major Mexico gateways. Union Pacific provides value to its roughly 10,000 customers by delivering products in a safe, reliable, fuel efficient and environmentally responsible manner (https://www.up.com/cs/groups/public/documents/up_pdf_natedocs/pdf_arizona_usguide.pdf).

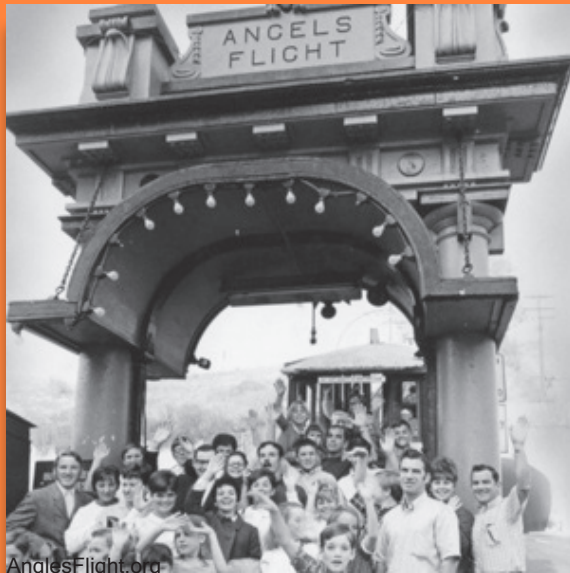


In his book Image of the City, Kevin Lynch posits that, "paths, the network of habitual or potential lines of movement through the urban complex, are the most potent means by which the whole can be ordered (Lynch, 96). In our case the Union Pacific Railroad tracks are seen as something with a spatiotemporal quality. Meaning that, whether the train is running or not, there is something to be valued by the presence of those tracks during any time of day.

Its history should be embedded in the minds of the people who reside within the city. At times a sense of stillness occurs, and as the sound dissipates from the passing train cars we tend to forget that this movement is cyclical, but we familiarize ourselves with the noise of the trains whistle or the rumbling of the tracks and we remember what the train means for the city. This is why Tucson's downtown has continued to flourish.

A prime example of a city whose cultural institutions rely on the image of a train is Los Angeles. Los Angeles's Angels Flight sitting just south of Bunker Hill was a way to get people up and down a very steep grade change. This area, once inhabited by many residences, has greatly diminished in number due to many owners and the advancements of the automobile. Angels Flight was shut down, and the cars dismantled from their tracks and stored in a dark warehouse in 1962 (angelsflight.org/history). This crippled the image of Bunker Hill. Today Bunker Hill area still suffers from its loss of people and is in need of its own sense of its movement. The revival of the Funicular has brought back a sense of movement, history and culture to Bunker Hill (Banham, 77-78).

Whether we decide acknowledge it or not the train is an integral part of our city. It reminds us of our past, our present, and will endure into our future. It is for these reasons why the train tracks that propagate along side Tucson's Urban Fissure are hierarchically more important than highways and roads. Nonetheless, roads and highways allow us to come together to experience the history and culture that surround our trains but by means of the automobile.



AnglesFlight.org



AnglesFlight.org



AnglesFlight.org

Cars and Roads:



Tucson is known for being a very car-centric city. Of the man made vectors, the automobile is arguably the most important and plays a bigger role in peoples everyday lives. From early morning to late evening we are dependent on the vehicle for travel. From work, to school, and back to home again, cars allow us to traverse extremely large areas and at many variable speeds. As the development of cars and modern transportation evolves, so does the city.

In 1899 the automobile had arrived to Tucson. It allowed the city to flourish and spread, there was life, there were people, and there were cars. People were able to do more, travel further, and landscapes were an activity to be a part of, and life was good. (Tucson.Gov, 'Oracle Area Context Study'. N.p., 2015. Web. 28 Oct. 2015).

Tucson's history of the car is very rich, from Miracle Mile and its many auto shops and neon signs to the first races held on Speedway Boulevard, the history of the car is forever ingrained in the pavement and it still continues to move us emotionally. But ideas of movement are forever instilled in every city we encounter. This fast paced, rapid movement reminds that there is a language to the crazy paved network of roads. Reyner Banham expresses in his book Los Angeles, how to read a city. For the sake of Los Angeles, he points out that, "One can most properly begin by learning the local language; and the language of design, architecture, and urbanism, is the language of movement (Banham, 5). To understand a city one must experience it through movement.



Lewis Mumford describes the avenue as a being that is the most important to a city, "The Avenue is the most important symbol and the main fact about a city. Not always was it possible to design a whole new city, but in the layout of half a dozen new avenues, or in a new quarter, its character could be re-defined"(Mumford, 367). The car coupled with the avenue was a force to be reckoned with. Avenues and roads altered the perception of cities, and the car changed our way of life. But by around the 1970's there were numerous factors contributing to the decline of car culture. Flying became less and less expensive, the emergence of interstate highways, and the oil crisis of 73'(Tucson.gov).

Presently, our landscapes are vastly changing. They are becoming a part of our built fabric. Luckily in Tucson, we have our mountains, which provides us with an extra blanket of security. There is a shift to move away from the busy hustle and bustle of the city centers and retreat to a more natural, calmer, setting. The automobile allowed us to experience multiple faces of a city while simultaneously interacting with the static, complex, beautiful, organic, entity known as the landscape. (<http://www.sscnet.ucla.edu/anthro/faculty/goodwin/cartalk.pdf>).

In the article, Car Talk, Goodwin helps bring to the fact that an object noticed, would quickly pass from view given the automobile's speed, and that this often occurs in overlap (Goodwin, 16). What is underlined is that the car is a construct by which we see the vast landscape. That even though we are bound to the limits of the automobile, we are still part of the landscape, and the landscape continues to move all around us while we move with it. Anonymous, United States Route 80, From Savannah, Georgia, to San Diego California. University of Arizona Special Collections ca. 1930 AZZ.2: R80.



TUCSON MOUNTAINS
"Our Security Blanket"

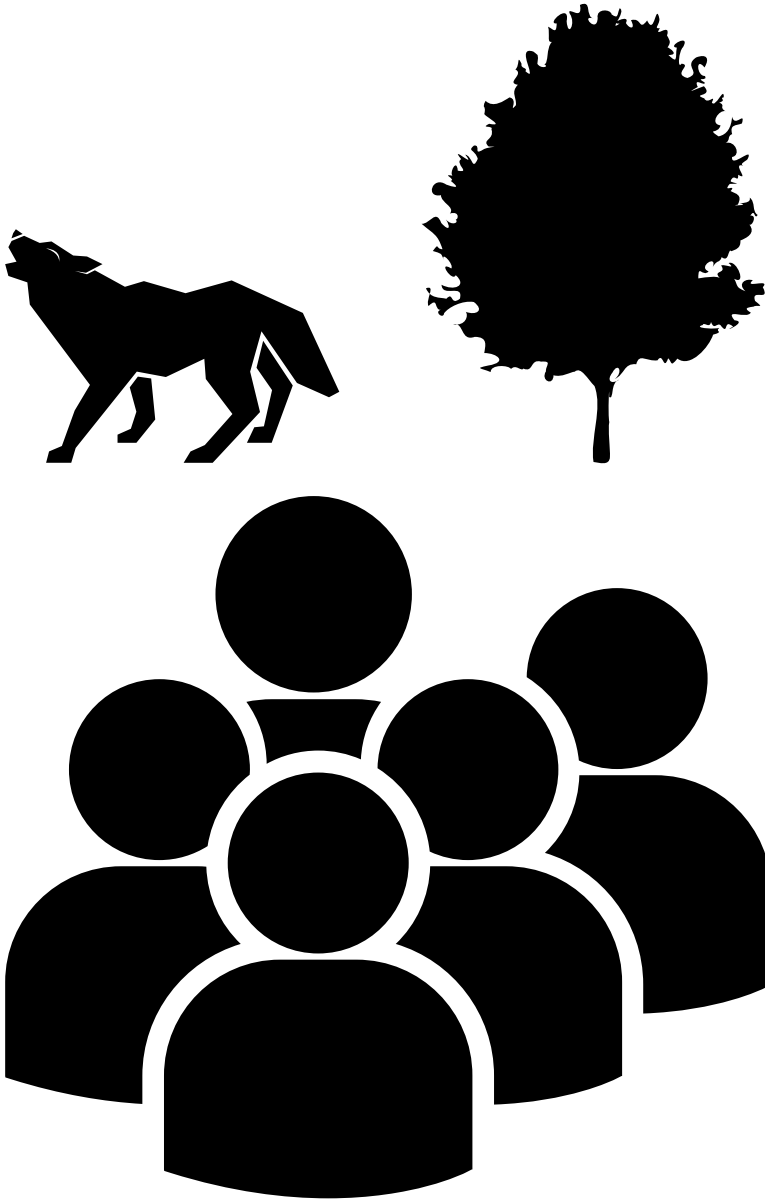
"The car coupled with the avenue was a force to be reckoned with. Avenues and roads altered the perception of cities, and the car changed our way of life".



Even though we are bound to the limits of the automobile, we are still part of the landscape, and the landscape continues to move all around us while we move with it.

Biological Vectors:

Biological vectors help enforce a sense of movement because they are rarely static, they are drivers, and they allow for the landscape to be seen as a quantifiable, measurable living being.



People as Vectors



ismm.co.uk/



People are the most developed type of biological vector. We have the propensity to change the landscape, as well as alter the course of movement for other vectors such as animals. Animals are also a very distinct and important type of vector. We see their mark on the landscape and they invariably see ours as well. Animals provide us with one of the first signs of change in our evolving matrix we call the landscape. They show us a more natural pattern of movement, which help us gauge how, and in what manner, we interact with the landscape. But many animals are dependent on vegetated vectors as well.

Plants, although for the most part static, can still be considered an entity that behaves as a vector in the landscape. The germination of seeds and introduction of new plants and the interaction species help determine how we people and animals accept our new environments. Plants allow us to understand what is working well and what is not within our environment.

Lastly it is fundamental to keep in mind that these vectors are all interrelated to one another. That with out one we could not have the other. We will take a look at how people, animals, and plants behave to help form our sense of movement upon the landscape.



In ancient times people and landscapes were intrinsically intertwined. People moved through the landscape for much more practical reasons than they do today. Marsh points out that the, “ancients’ interest in environmental planning was purely practical, having to do with things like trade, food supplies, water, and defense with little or no regard for what we would call environmental impact”(Marsh, 14).

People are perhaps an entity that can either save or destroy our landscapes. The movement of people throughout history has shown us that we tend to gravitate towards the landscape while also imposing upon it, rather than working along its side.

Since our migration to the new world (The America’s) we have been demolishing, reconstructing, manipulating and building upon our landscapes. In his article Inherit the Grid, Curt Meine discusses the nature of people and the need to move to the landscape. “We are drawn to places where the larger reality of the earth can be sensed, those who dwell in the mountains have ready access to such panoramic views, and those who dwell near the oceans and other wide waters are also blessed”(Meine, 49). Meine offers a positive view for people to want to become part of Landscape, but as we later encounter in his article we move through the landscape neglecting any potential value it has to offer. When we first set out to make our boundaries for our 13 states we ignored our wilderness, we disregarded the mountains, streams and rivers, valleys and hills and we tried to impose an unnatural order on the natural land (Meine, 50-51).

On a lighter note, James E. Snead describes the university landscapes as places, which allow people to move through different mediums, while also experiencing a number of spaces that appeal to the senses.



NPS.Gov

Montezuma Castle



Montezuma Well



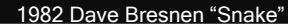
“The view from windows overlooking collegiate quadrangles almost anywhere incorporates a common perspective, including that of a representative landscape of movement. Open space between the buildings, filled by grass, trees, or plantings, is bounded by sidewalks, some of which cross open ground in crisp diagonals. Between classes students march along these preordained routes toward their next destination. And yet some of these strollers make their own way across the grass, a shared act of subversion that over time blazes clear trails through of greenery” (Snead, 43).

When we study the movement of people in context, we are reminded why the context is so important. Context shapes the way we move through landscapes. It allows us to rationalize and understand why we move through spaces. Lynch suggests that we move through spaces because we are strategically linked to an environmental image. He proclaims that the legibility of a city happens when inhabitants perceive it through the “visual sensations of color, shape, motion, or polarization of light, as well as other senses such as smell, sound, touch, kinesthesia, sense of gravity, and perhaps of electric or magnetic fields” (Lynch, 3).

The Urban Fissure in Tucson has the potential to attract the masses because its location allows the bridging of multiple historic and cultural districts. When moving through the downtown district north to 4th Avenue, we could move through a new place that instills a sense of function meaning and time. As the world approaches a population of nearly 7 billion people we are reminded of what little we have left, what little we have to hold on. Our movements shape the way we see our environment as well as help shape how other living beings interact with it. As we continue to construct landscapes and built environments we invariably alter the course of many other living beings.



□ □ □ □



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22

In his book *Safe Passages: Highways, Wildlife, and Habitat Connectivity*, Jon P. Beckmann emphasizes the importance of habitat connectivity through wise and careful design of our road systems. “Rapid population growth, and increase in extractive industries, uncontrolled and unplanned development, and new transportation infrastructure are threatening many of our natural resources and the persistence of wildlife populations”(Beckmann, 5). Roads though are a minute part of interrupted animal movement. The creation of built environments tends to also drive species to other fragments within their landscapes. Tall buildings, monuments, parking garages, surface lots, all play a role in contextualizing our urban patches. They also help divide connective tissue of our natural matrix, which alters or halts species movement.



When taking part in designing new landscapes, built or natural there are as Beckmann states two ways to conserve and celebrate animal movement, “Before initiating project planning the first step is to determine whether impacts can be avoided or minimized. Avoidance eliminates impacts to wildlife habitat, whereas minimization reduces the impact on wildlife to levels that can often avoid or reduce the need for mitigation”(Beckman, 19). These two considerations to mitigating animal movement are extremely important because animals allow for a diverse interaction with the natural areas of a site. For this urban fissure the sense of animal movement could enhance the peoples enjoyment of the site through areas where people and animals are separated by natural courses, but connected through visual site lines. With the help of Geographic Information System (GIS), a step by step process of evaluation would allow us to take a glimpse into the most desirable site designs for human and animal interaction within site a specific approach to conserving animal movement. Many of the considerations for site design also falls into the realm of natural movement. Natural movement helps broadcast animal and human movement as well.

Foreword by Richard T. T. Forman

SAFE PASSAGES



Highways, Wildlife, and Habitat Connectivity

Edited by Jon P. Beckmann, Anthony P. Clevenger,
Marcel P. Huijser, and Jodi A. Hilty

Jon P. Beckmann

Natural Vectors

Natural movement can be described as something that transcends just the physical realm of movement. It is ingrained in the landscape and perceived through our senses. Throughout history people have been gravitating towards understanding natural landscape processes, but falling short much of the time. It is inevitable that as we continue to build and restructure our environments that we will take away from the landscape, it is our goal to prolong the access to our most valuable resource: water.



Water

A prime example of the degradation of this type of vector is our own Rillito River, which is situated in the northern extents of Tucson. Once a flowing river full of life and resource now stands empty of any type of fluid movement. Water is a resource that is seen as a cleansing element and in many cultures it is regarded as a unifying element between man and landscape, and in Tucson water is celebrated, because it is the single most important landscape vector that gives life and nutrients to many living organisms.



In his pivotal writing, *Chasing Water*, Brian Richter asks very important questions about water and what water means to us, “We possess the means to wring every last drop from the planet’s rivers and lakes, or to suck its aquifers dry, but is that what we want to do? Or do we instead want to leave some water alone, enough to fuel the biological engines of our planet, or to serve as a hedge against dry times and an uncertain future, or simply to irrigate our souls with the intrinsic beauty of flowing water? Can a river still be a river when the water is all gone? (Richter, 7).

Today we see a global concern for our water resources. The World Economic Forum has now placed water supply crises near the top of its list of global risks, and of water loss”(Richter, 14). When taking a closer look at the southwest region of the United States, a primary area of concern is Arizona. The fact that Arizona is mostly arid brings up the aforementioned questions about water scarcity. Water passing through a landscape system is influenced by the ongoing human activities in that landscape, but also by polluting activities upwind or upstream, such activities may be related to urbanization, industry, agricultural intensity, tourism etc. Human production activities in the landscape may influence or modify a number of different determinants of water partitioning, of water pathways taken, and of chemical interaction between the moving water and its pathway surroundings”(Falkenmark, Malin, and Zdzislaw Mikulski. “The Key Role of Water in the Landscape System: Conceptualization to Address Growing Human Landscape Pressures”. GeoJournal 33.4 (1994): 355-363).



ArizonaLeisure.com (Alan Stark)



alltrails.com/trail/us/arizona/seven-falls-trail



We have always been connected to the water and it is not until recent technological advancements that human activates warranted strict mandated rules about water usage. As the global population continues to rise our rules for resource management will become more severe.

In the article titled Energy Landscapes Shape Animal Movement Ecology the authors mention dynamic energy landscapes and how they facilitate movement of species across many types of substrates. Rivers, and waterways can be considered dynamic landscapes because of the rich diversity they bring to our landscapes and the type of positive movement we are all so familiar with.



SYNTHESIZED MOVEMENT



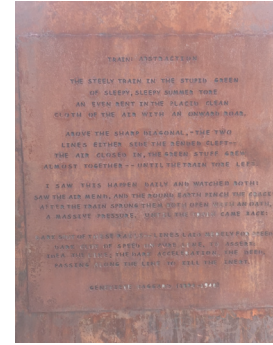
LANDING

When first arriving at a new site it is important to orient ones self to the site. All preconceived notions about the site become remnants of past influences. The arrival sequence of a site is just as important as the departure scenarios. When one feels a sense of arrival he or she becomes acquainted with the site on a much more personal level.



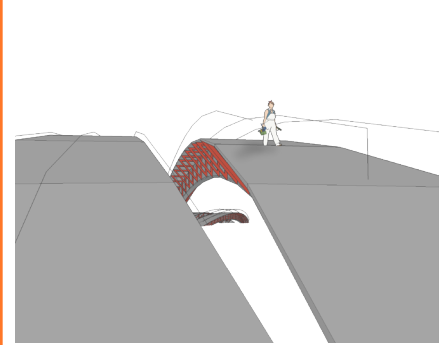
GROUNDING

This anchoring upon the site gives the participants the feeling of uniqueness. Repeated visits give people the opportunity to discover, rediscover, and remember areas of the site that most closely relates to the fond memories of other landscapes.



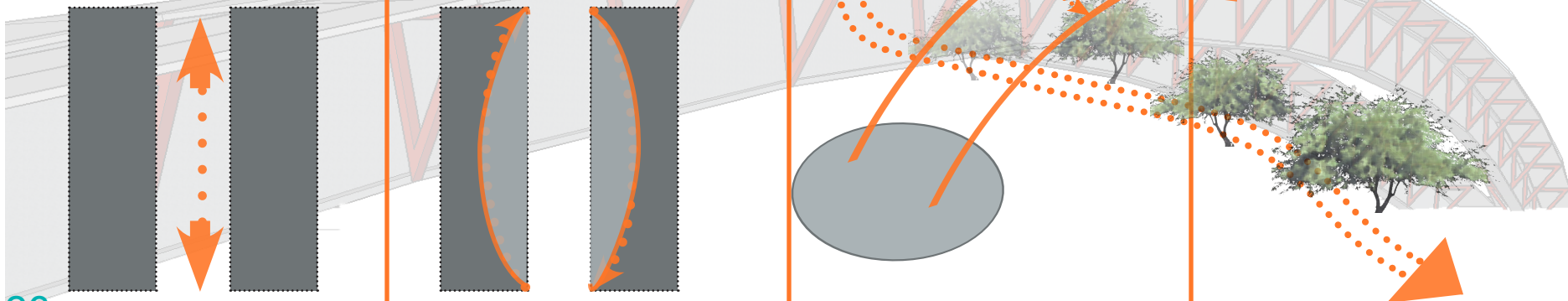
FINDING

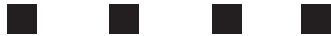
"Finding entails the act and process of searching as well as the outcome, the thing discovered. It is both an activity and an insight"(Recovering Landscapes, 63).



FOUNDING

The creation of a sense of place would need to extend past the boundaries of the site and tie into the rest of the city's fabric.

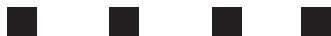




When we contemplate movement we notice that there are many factors that are involved in creating the sense of movement within a site. After learning about the many types of vectors that are attributed to movement we notice that everything comes together in a unified realm and we perceive it as a whole entity through the lens of time. When looking at all the vector types simultaneously we start to see a much clearer picture of how an urban landscape starts to behave. But to fully understand landscape movement we must try to envision ourselves in an area specific to our site.



Our sliver of land or urban fissure is an area of Tucson that needs a sense of movement to instill identity. In the volume *Recovering Landscape* Christophe Girot describes in his essay the four trace concepts in landscape architecture. His ideas about experiencing a site really grew upon me especially when coupling his ideologies with the notions of movement within a landscape. By analyzing his four trace concepts and synthesizing them with our ideas of movement we will be able to understand better how to program a site.



“As a medium of symbolic representation, the landscape and its constitutive elements - stones, plants, water, earth, and sky - when artfully composed - have provided humans with some of the most sacred and powerful places of embodied meaning”(Theory in Landscape Architecture, 146)



Landing



When first arriving at a new site it is important to orient oneself to the site. All preconceived notions about the site become remnants of past influences. The arrival sequence of a site is just as important as the departure scenarios. When one feels a sense of arrival he or she becomes acquainted with the site on a much more personal level. Girot clarifies that the landing or arrival must provoke a sense of complete displacement and outsidership to be really effective (Recovering Landscapes, 60).

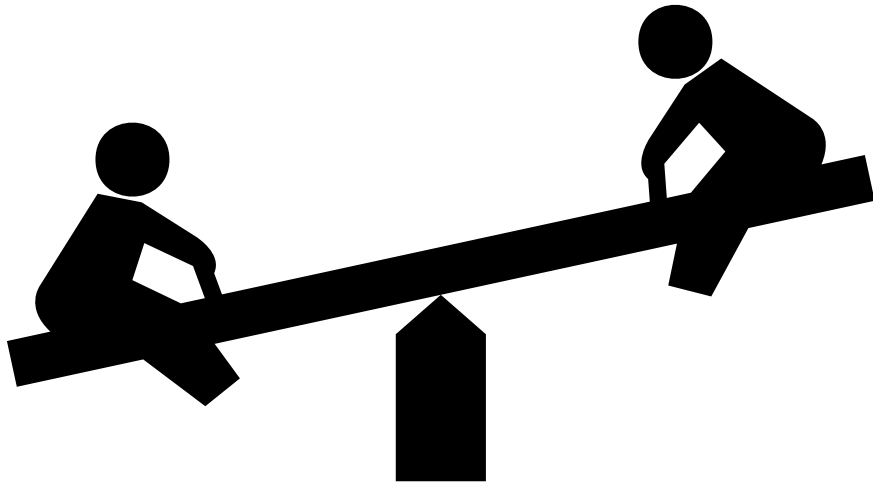
Mary Palmer Dargan of Dargan Landscape Architects would also agree that the arrival sequence or landing of the site is the most important aspect to discovery. "Whether located in the city, suburbs or countryside, the approach and arrival sequence is the welcome mat for visitors. This series of linked spaces takes visitors from the street to the front entrance of the house (or park). The distance may vary from a few feet in urban settings to a few miles in the country" (Dargan, 72). One could also argue that monuments allow visitors to experience the notions of Landing because they attract people from far away places. They tend to paint images of wonder and mystery. The initial thoughts of a place can be completely changed by landing at a monument. Therefore, monuments are partly landmarks of a landscape whether built or natural. Kevin Lynch expresses this idea best in his definitive writing *The Image of the City*. He emphasizes that landmarks are types of point-references. "They are usually a rather simply defined physical object: building, sign, store, or mountain" (Lynch, 48).

Nodes can also lend themselves to be points where people enter or arrive at a site. They are large areas that allow many users to arrive and take a break before the grounding takes place. Currently, the urban fissure has no sense of arrival. There is no way to move people through the city to the site. The only hint of opportunity expresses itself at the southeast portion of the site where Iron Horse Park lies. But, the sense of arrival soon dissipates and we are again reminded of the reasons why we need to discover more of the site.

Grounding



Giro's philosophies of grounding allow the users of the site to become in tune with what lies within, but only after multiple visits (Recovering Landscapes, 62). This anchoring upon the site gives the participants the feeling of uniqueness. Repeated visits give people the opportunity to discover, rediscover, and remember areas of the site that most closely relates to the fond memories of other landscapes.



This is further strengthened in Lauri Macmillan Johnson and Kim Duffeks work *Creating Outdoor Classrooms*, where the two authors spark a study about adult memories of valued play places. The study revealed that, "approximately 25 percent of the responses mentioned public parks and playgrounds as their place for play, whereas approximately 75 percent of the responses reported the use of less structured spaces" (Duffek and Johnson, 9). Exploration becomes a shared and recurring activity, spaces become better utilized and there is something to do. Especially when the participant establishes crucial parallels between, man and earth.



Finding



“Finding entails the act and process of searching as well as the outcome, the thing discovered. It is both an activity and an insight”(Recovering Landscapes, 63). Girot alludes to the fact that experiences are always different because there are multiple ways to experience a site and that those experiences will yield new discoveries. When speaking of design implications and the term finding, we can think of this as a crucial step towards making Tucson’s Urban Fissure, a unique place with unique opportunities to discover.



These unique qualities might include and are not limited to, structures, material qualities of the site, specific sight lines, object interaction, processions, or an overall theme to a site. Finding is an open ended experience and can occur during multiple site visits. It is unlikely that one would synthesize the first three trace landscape concepts, landing, grounding, and finding on their first visit to a new site. Therefore it is imperative that the site be culturally and historically bound to its surroundings.



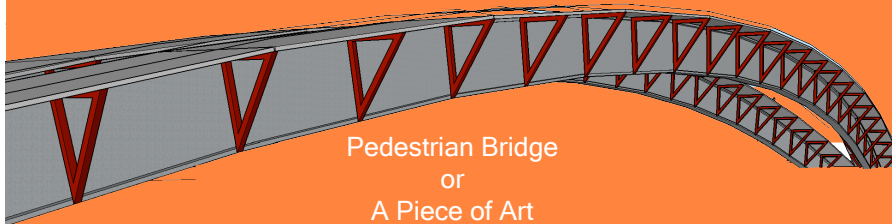
“Finding entails the act and process of searching as well as the outcome, the thing discovered. It is both an activity and an insight.”



Founding



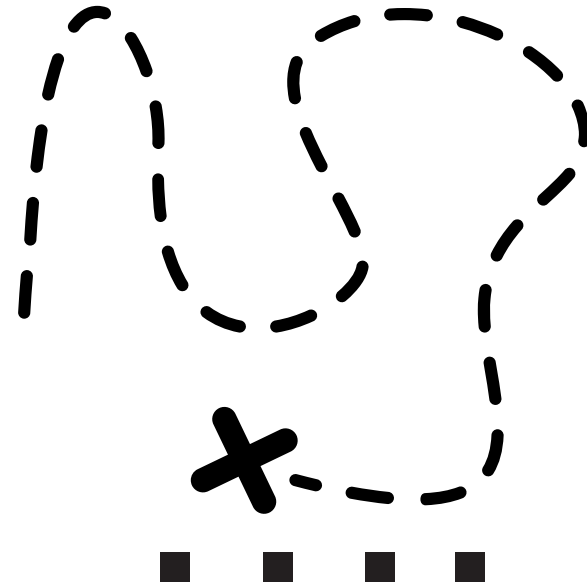
The ideas of founding relate to a synthesis of the aforementioned trace landscape concepts. Girot mentions that founding is the most durable and significant of the four trace acts because the site comes into full focus, it is fully realized. He later states that this idea of founding can also be understood as bringing something new to a place (or region), something that may change and redirect a particular site (Recovering Landscapes, Girot, 64). For our case the goal is to understand how new elements could help transform our site and engage the public through cultural and historical contexts. The creation of a sense of place would need to extend past the boundaries of the site and tie into the rest of the city's fabric.



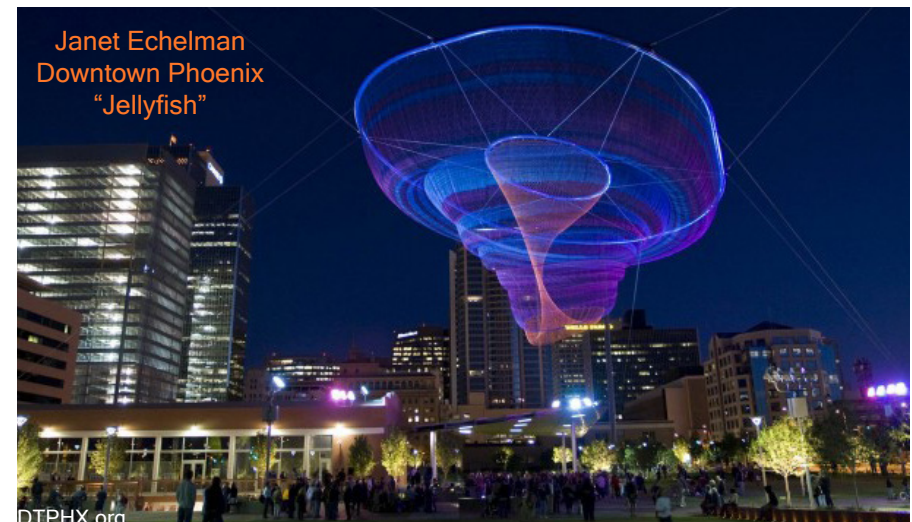
Art is an entity that transcends and extends past the boundaries of a site. It is both tangible and intangible through the senses. It is realized through a deeper understanding of context in which it is situated. It can be found in plain site, or be hidden, staring one in the face. The ideas of founding allows us to try to uncover these mysteries, but it is only through multiple visits and much contemplation when we realize what it is that we found.



X Marks the Spot



The creation of a sense of place would need to extend past the boundaries of the site and tie into the rest of the city's fabric.



URBAN PARKS

The International Federation of Parks and Recreation Administration (IFPRA) defines an urban park as, “Urban parks are delineated open space areas, mostly dominated by vegetation and water, and generally reserved for public use. Urban Parks are mostly larger, but can also have the shape of smaller ‘pocket parks’. Urban parks are usually locally defined (by authorities) as ‘parks’ (Benefits of Urban Parks, IFPRA). The green space sector of the IFPRA posits that urban parks are essential for live-able and sustainable cities and towns. One could argue that urban parks help facilitate biodiversity, physical health, positive social interaction.

BIODIVERSITY



Bluedotpost.com

Researches assessed that urban parks due to their often high levels of habitat diversity and micro-habitat heterogeneity, can constitute particularly important host-spots for biodiversity in the cityscape, albeit their key role is for recreation.

HEALTH



Mental health research indicates that urban parks increase peoples attention spans, reduces mental stress, as well as provide people with opportunities for recreation, promote psychological wellbeing, and more importantly aid in strengthening social interaction between multiple ethnicities and cultures.

SOCIAL COHESION



global-economic-symposium.org

In our case, issues of social cohesion should be taken into account in terms of a global migratory movement, amongst humans. We should see it as a positive activity that has been spread over many generations. Movement within urban parks promotes social cohesion between many user group types as well as help create diversity, eliminates gentrification, and promotes general welfare for the public.

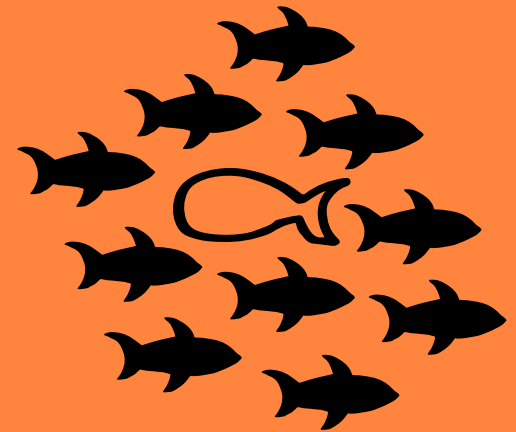
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“Biodiversity is the variety of life. It can be studied on many levels. At the highest level, you can look at all the different species on the entire Earth. On a much smaller scale, you can study biodiversity within a pond ecosystem or a neighborhood park. Identifying and understanding the relationships between all the life on Earth are some of the greatest challenges in science”(nwf.org).



Research on urban biodiversity in the past decade has become significant, not only because of the growing impact of urbanization on natural ecosystems, but also because of the rising recognition of urban areas as hosts for innovative ways to conserve and promote biodiversity”(IFPRA). Researches assessed that urban parks due to their often high levels of habitat diversity and micro-habitat heterogeneity, can constitute particularly important host-spots for biodiversity in the cityscape, albeit their key role is for recreation (Cornelis and Hermy, 2004). (Cornelis J., Hermy, M., 2004. Biodiversity relationships in urban and suburban parks in Flanders. Landscape and Urban Planning 69, 285-401.)

HEALTH



Health:

Urban parks have an ability promote both physical and mental health. Physically urban parks provide a sense of movement through physical activity. This may be in a form of a stroll, a jog, a bike ride, or just walking to the park to eat lunch. Another result of the review is that obesity, a main global problem, can probably also be reduced by access to parks. This seems to be particularly relevant for children. On mental health research indicates that urban parks increase peoples attention spans, reduces mental stress, as well as provide people with opportunities for recreation, promote psychological wellbeing, and more importantly aid in strengthening social interaction between multiple ethnicities and cultures. (IFPRA, 9-11).



SOCIAL COHESION



Kaergard address issues of social cohesion in terms of a global migratory movement, amongst humans, as a positive activity that has been spread over many generations. They also declare that movement within urban parks promotes the same type of social cohesion as well as help create diversity. (Kaeragard N. 2010. Social cohesion and the transformation from ethnic to multicultural society: The case of Denmark Ethnicities 10(4), 470-487).



LITERATURE REVIEW IMPLICATIONS

HISTORY

- Design Should Tie into the Cities History
- Take Elements from the City that are Working Well
- Give back to the City something lasting so other generations can benefit.
- Teach People the Importance of History when speaking in terms of Design.



Los Angeles City Hall within the Urban Landscape

TYPOLOGY of MOVEMENT

- Movement is a Desired outcome.
- Access to existing Infrastructure is crucial for on going movement night and day.
- To facilitate a Positive sense of Movement design should be focused for People.
- The addition of something new for the city would help bring people together.

SYNTHESIZED MOVEMENT

- Occurs when many vector types are seamlessly integrated into design.
- Most effective when no one vector type has priority over another.
- Integrates extensive study of the surrounding area and ties into multiple city nodes.
- Give people something to think about that transcends just the physical realm of inhabiting a park.

URBAN PARKS

- Should try to Promote Designs which are Inclusive
- Promote Healthy Human interaction with Vegetation Palette
- Use the City as a Driver for Design.
- Create interesting places for maximum Diversity.
- Urban Parks should be used as a Learning Laboratory.



"Urban Light"
A Landmark for the 21st Century



OLYMPIC SCULPTURE PARK



SANTA FE RAILYARD PARK



RAILROAD PARK

Even though urban parks help increase biodiversity, promote physical and mental health, and aid in strengthening social cohesion, they must also be designed for the human to achieve the aforementioned benefits. There is always a question of scale when looking at an urban fabric because it is always influx. So it is crucial to pay attention to how other professionals deal with similar situations.

When looking at precedent studies that have dealt with similar constraints, we can acquire a greater sense of how to approach a sustainable, ethical, and poetic design methodology to bridge the gap with our Urban Fissure.

CASE REVIEWS

- Manipulation of Land Mass
- Use of Large Scale Art
- Elevating Viewing Planes
- Detail to Materiality



OLYMPIC SCULPTURE PARK

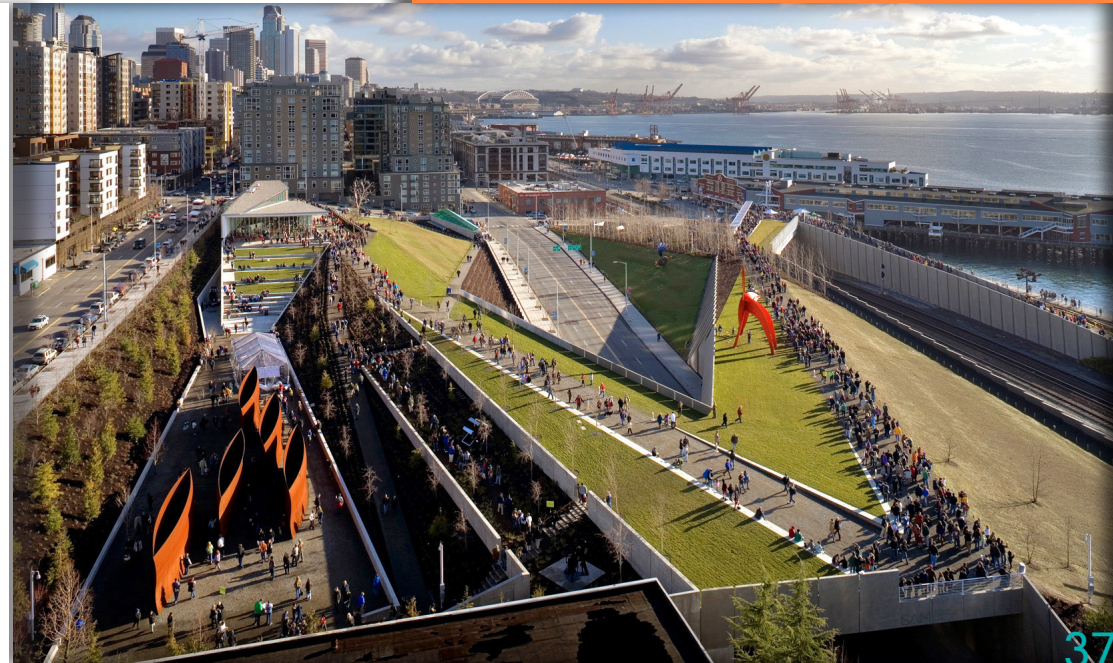
location: Seattle, Washington
 year: 2007
 designer: Weiss/Manfredi

SYNOPSIS

- Model Urban Sculpture Park
- Transportation Hub
- Continuous Constructed Landscape
- Connects to Urban Core
- Revitalizes Waterfront

DESIGN IMPLICATIONS

- Space for art, performances and educational programming.
- Pedestrian routes descends to the water, linking three new archetypal landscapes of the northwest:
 - a dense temperate evergreen forest,
 - a deciduous forest
 - shoreline garden.
- Brings the park itself into the landscape of the city.



RAILROAD PARK

location: Birmingham, Alabama
year: 2010
designer: Tom Leader L.A..
size: 19 Acres

SYNOPSIS

- Railroad Influence
- Large Urban Park
- Appeals to Many User types
- Incorporates Landscape Practices
- Incorporates expansive Views Inward and Outward



DESIGN IMPLICATIONS

- Integrated to Railroad
- Grounded within Community
- Attention to Materiality
- Connects to Urban Nodes
- Topography as a Design Tool
- Orientation to Railroad
- Rooted in Historical Setting



Images Credits: Tom Leader.com

THE SANTA FE RAILYARD

location: Santa Fe, New Mexico
 year: 2008
 designer: Ken Smith Workshop/ SFRCC
 size: 50 Acres

SYNOPSIS

- Strong Railroad Influence
- Large Urban Park
- City Initiative and Architecture Colab.
- Focus on Urban Connections to Existing and Historic City Elements
- Largely Locally Owned
- Positive Response to Natural and Built Landscapes

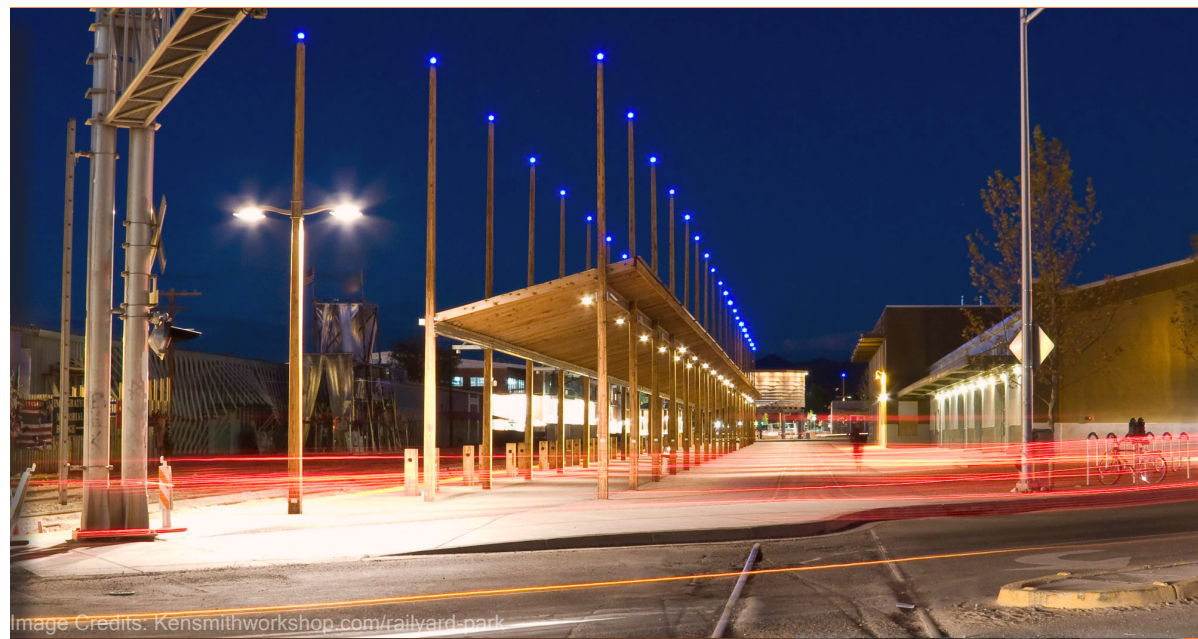


Image Credits: Kensmithworkshop.com/railyard-park

DESIGN IMPLICATIONS

- Plants as a Textural Palette
- Circulation as a Didactic Tool
- Materials as a Connecting Tool to the Urban Fabric
- Utilizes the Train Tracks as a Design Opportunity
- Instills a Sense of Movement throughout the Town



GRAND CANAL SQUARE

location:
year:
designer:
size:

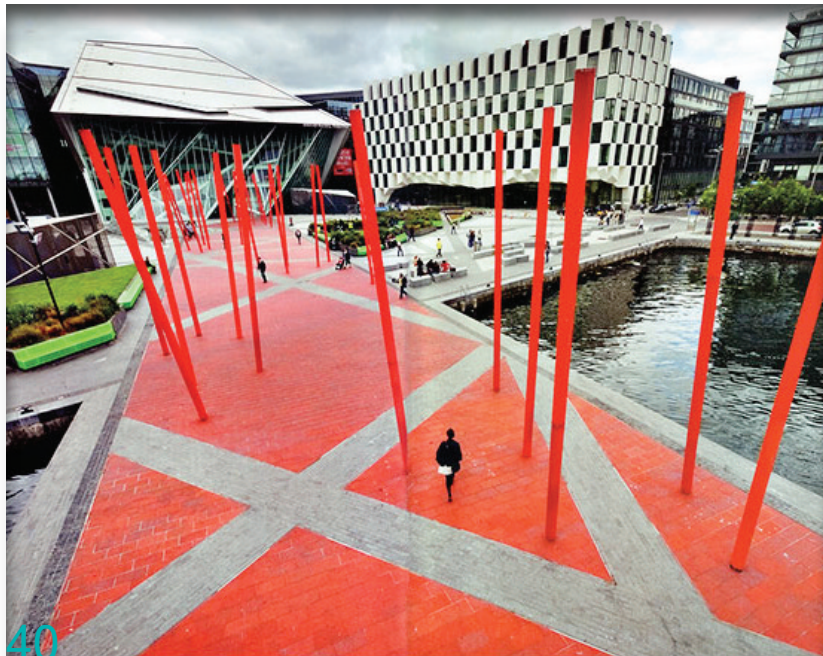
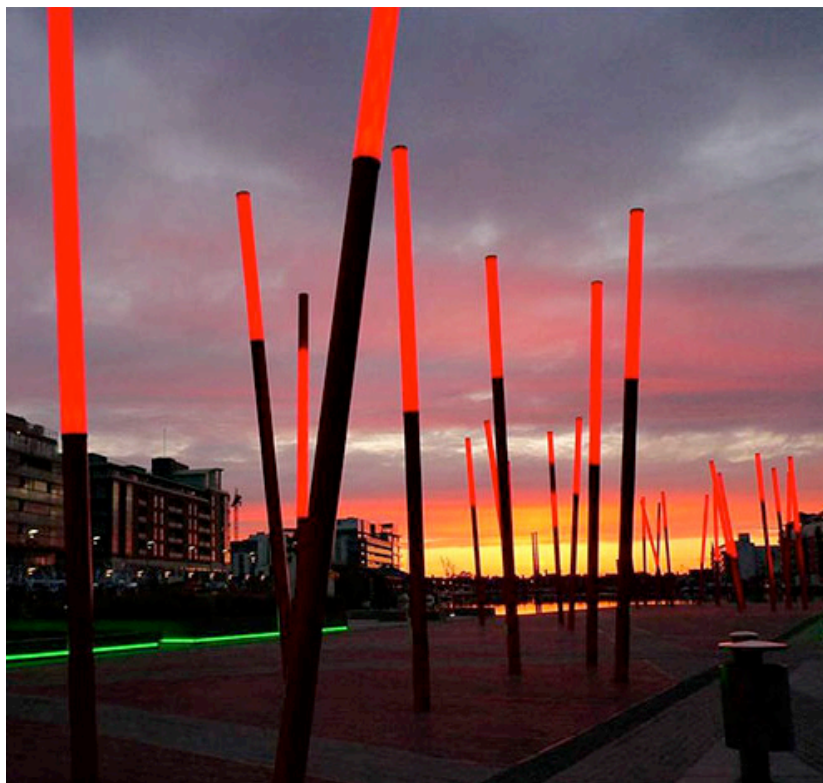
Dublin, Ireland
Still in Progress
Martha Schwartz
1 Hectare

SYNOPSIS

- Plaza as a Destination Place
- Regenerative Design
- Innovative Technology
- Use of Light and Space
- 24 Hour Usability
- Space as a Social Attractor
- Tactile Experience

DESIGN IMPLICATIONS

- Use of Native Plants
- Celebrate Water
- Tie to Historic Wetland Ecology
- Bring Color to the Plaza
- Interactive Spaces
- Extension of Architectural Space
- Create and Outdoor Theater



Images Credits: Martha Schwartz.com



KAUFMANN HOUSE

location: Bear Run, Pennsylvania
 year: 1935
 designer: Frank Lloyd Wright
 type: Residential House

SYNOPSIS

- Rooted in Landscape
- Anchored Dwelling
- Sustainability
- Horizontality as a Datum
- Suspension
- Environment as a Sensorium
- Tactile Experience

DESIGN IMPLICATIONS

- Create a Sense of Place
- Bring the Outdoors In
- River as an Audible Landscape Vector
- Create a Shelter
- Live with Nature not just Look at It.
- Create Harmony with Order



Images Credits: Falling Water.org

MILL RACE PARK

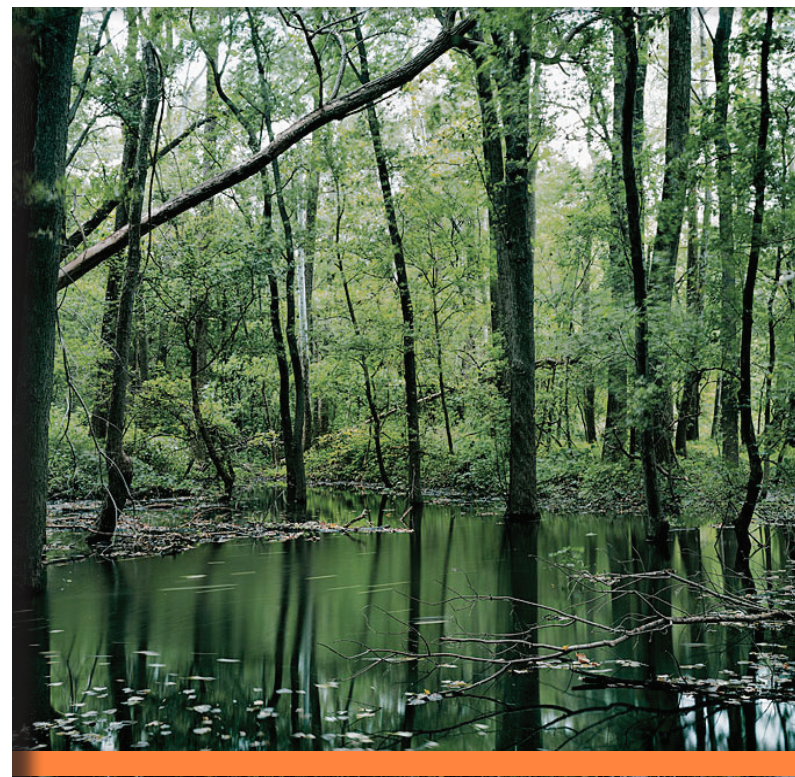
location: Columbus, Indiana
year: 1993
Designer: Michael Van Valkenburg and Assoc.
type: Regional Park 85 Acres

SYNOPSIS

- Accessibility
- Respect Natural Water Course
- Work with Landscape
- Additive Design
- Celebrate Annual Flooding
- Provide Amenities
- Preserve Historic Bridges

DESIGN IMPLICATIONS

- Use Existing Topography
- Use Flooding as Watering Tool
- Preserve Existing Vegetation
- Create a Romantic Feel
- Integrate Accessibility
- Give Architectural Expression
- Connect Historically

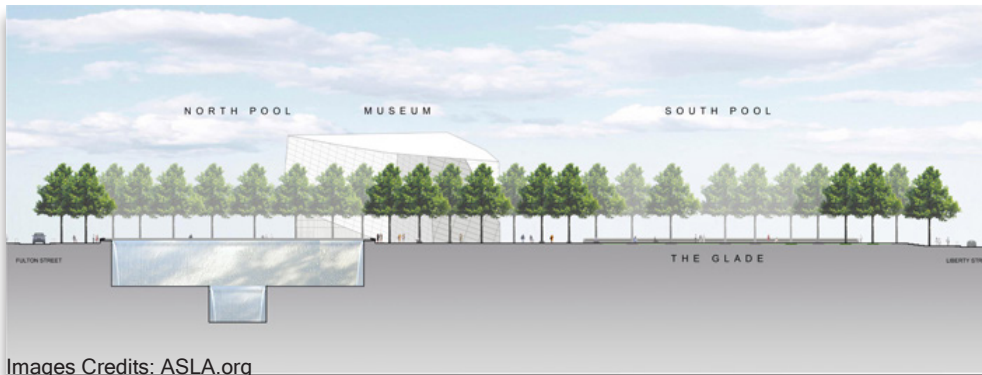


Images Credits: Michael Van Valkenburg and Associates.com



911 MEMORIAL

location: New York City, New York
 year: 2011
 designer: Peter Walker and Partners
 type: 8 Acre Large Urban Park



SYNOPSIS

- Ideas of Permanence
- Create Participation
- Celebrate Life Through Landscape
- Symbolic Representation
- Dualistic Scale

DESIGN IMPLICATIONS

- Contrasting Material Palettes; Hard vs. Soft
- Create a Procession that is Participatory
- Trees as a Representation of Life
- Voids in the Landscape Represent the Twin Towers
- Scaled to the Landscape and to the Human

CITY GARDEN

location: St. Louis, Missouri
year: 2011
designer: Nelson Byrd Woltz L.A.
type: 8 Acre Large Urban Park

SYNOPSIS

- 3 in 1 Park
- Uses River as an Eco Driver
- Multiple Experiences
- Didactic Tool
- Celebrate Art, Natural Processes, Community Life

DESIGN IMPLICATIONS

- Garden Park, Sculpture Park, City Park
- Garden Facilitates Learning through Native Vegetation
- Sculpture Creates a Tangible City Stage
- City and its Park is Tied in Historic Roots



Images Credits: CityGardenStl.org

THE HIGHLINE

location: New York City, New York
year: 2014
designer: James Corner, Diller Scofidio Renfro
type: Large Urban Linear Park



SYNOPSIS

- Prime example of Adaptive Reuse
- Community Involvement
- Use Regional Plant Palette
- Sustainable Methods for Design
- Interactive Material Palette

DESIGN IMPLICATIONS

- Utilizes History of New York's Railway as a
- Community as an Integral Player in Fundraising
- Use of Native Plants to create Unity
- Sustainable methods for Upkeep and Construction



Images Credits: Highline.org



FOUNTAIN PLACE

location:
year:
designer:
type:

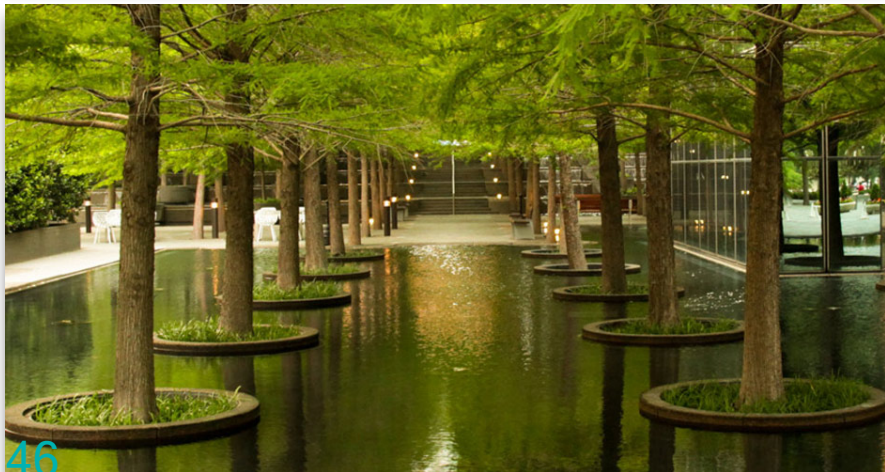
Dallas, Texas
1985
Daniel Kiley
Small Urban Park

SYNOPSIS

- Water as a Unifying Element
- Works with Existing Topography
- Creates a Sensory Experience
- Works with Architecture
- Urban Swamp

DESIGN IMPLICATIONS

- Water unites the people, nature and architecture
- Use of Plants to define an uninhabited space
- Architecture enhances gardens through Material Choices
- Massive amount of water creates an Urban Swamp



Images Credits: Cultural Landscape Foundation.org

LURIE GARDENS + MILLENNIUM PARK

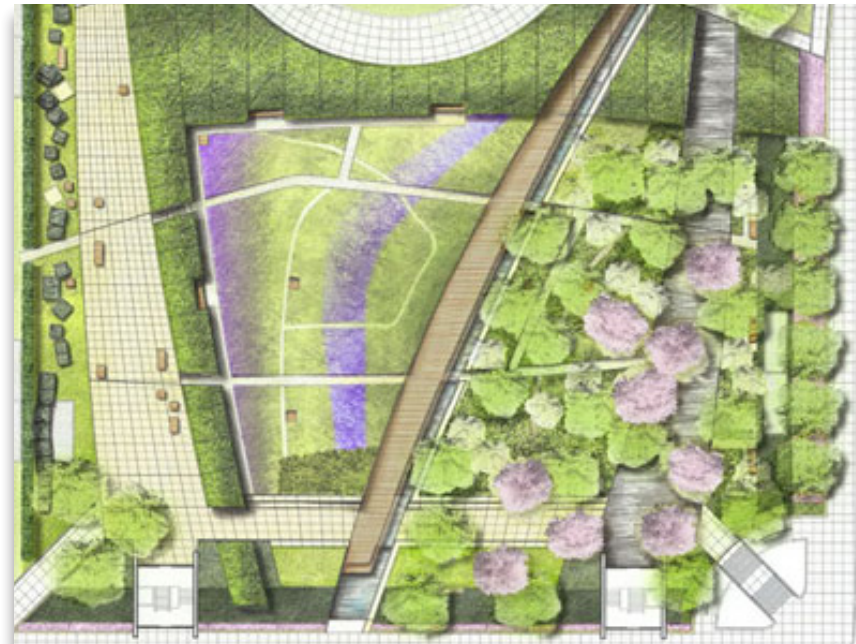
location:	Chicago, Illinois
year:	2004
designer:	Gustafson Guthrie Nichols
type:	5 Acre Small Urban Park + 319 Acre Large Park

SYNOPSIS

- Oasis in the City
- Engaging Plant Palette
- Garden as a Landmark
- Seasonal Use
- Celebrates the Past and Present

DESIGN IMPLICATIONS

- Lurie Gardens designed for Seasonal Use and Aesthetics
- Plants are used as Architectural Elements
- The Park is part of the City's Image
- Deeply Rooted in Historical and Cultural Context



CASE REVIEW IMPLICATIONS

The case reviews that were briefly looked at all played pivotal roles in their respective communities. By taking a look at how other professionals have tackled similar design problems, we have a greater sense of how to approach similar problems within our own city.

Moreover, they help us pinpoint specific types of problems which include, but are not limited to, issues of density, health, appearance, safety, walkability, diversity, and usability. These are just a few types of constraints that may be present at any type of site.

Case reviews also help us determine the scale in which work. Scale provides a crucial link to helping solve some of the problems that are closely associated to landscape features. In our case when we take a look at the Urban Fissure, we can see scale in many different forms. From urban infrastructure like roads and highways to the smallest tree or shrub, we must take into account a wide array of inputs to see how they coalesce.

For our urban park we must take into a detailed account of our surroundings and attempt to tie into historic and cultural nodes within our urban fabric while simultaneously instilling a sense of movement.

KEY IMPLICATIONS

Manipulation of Land Mass

Use of Large Scale Art

Use of Native Vegetation

Elevating Viewing Planes

Detail to Materiality

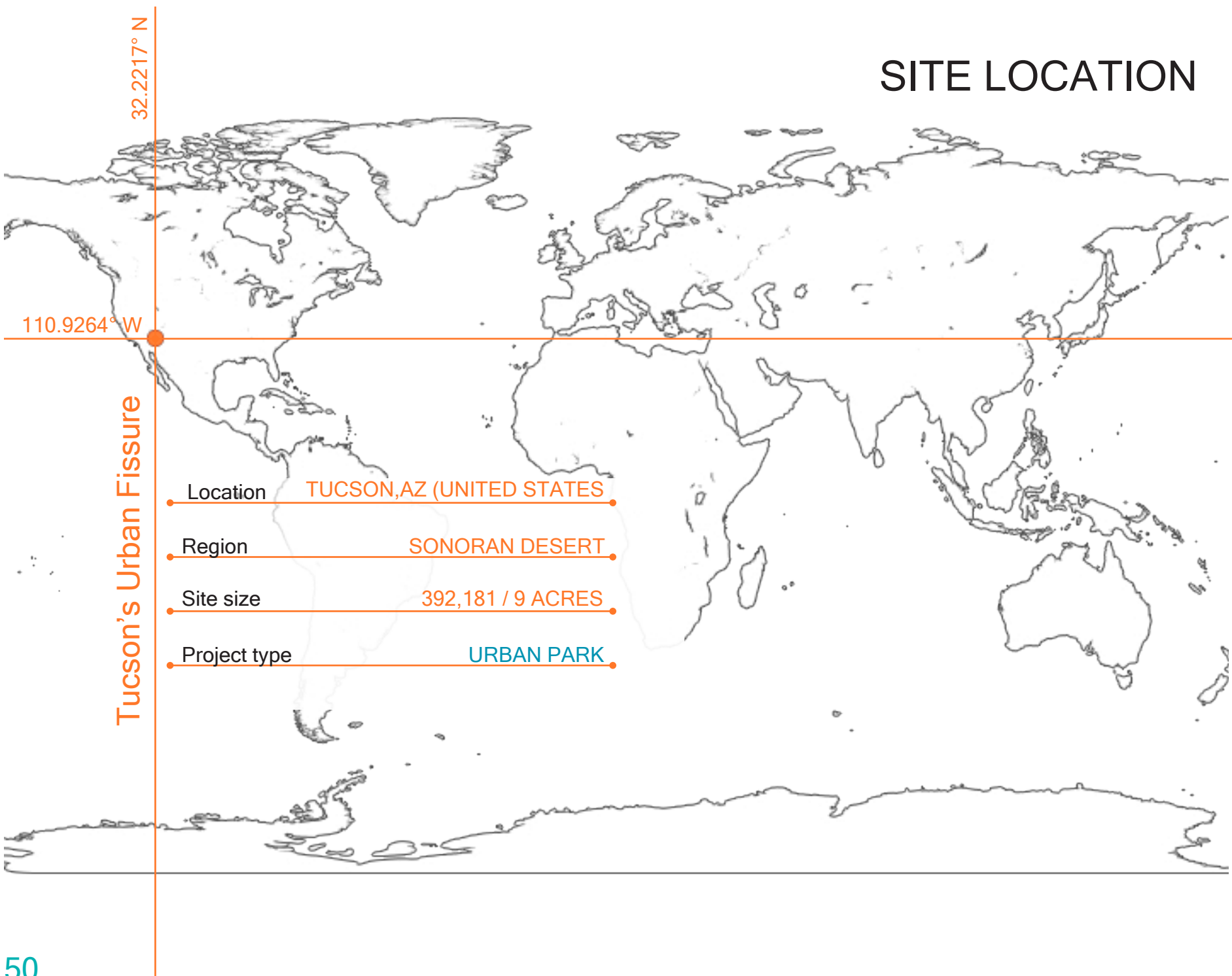


SITE INVENTORY & ANALYSIS

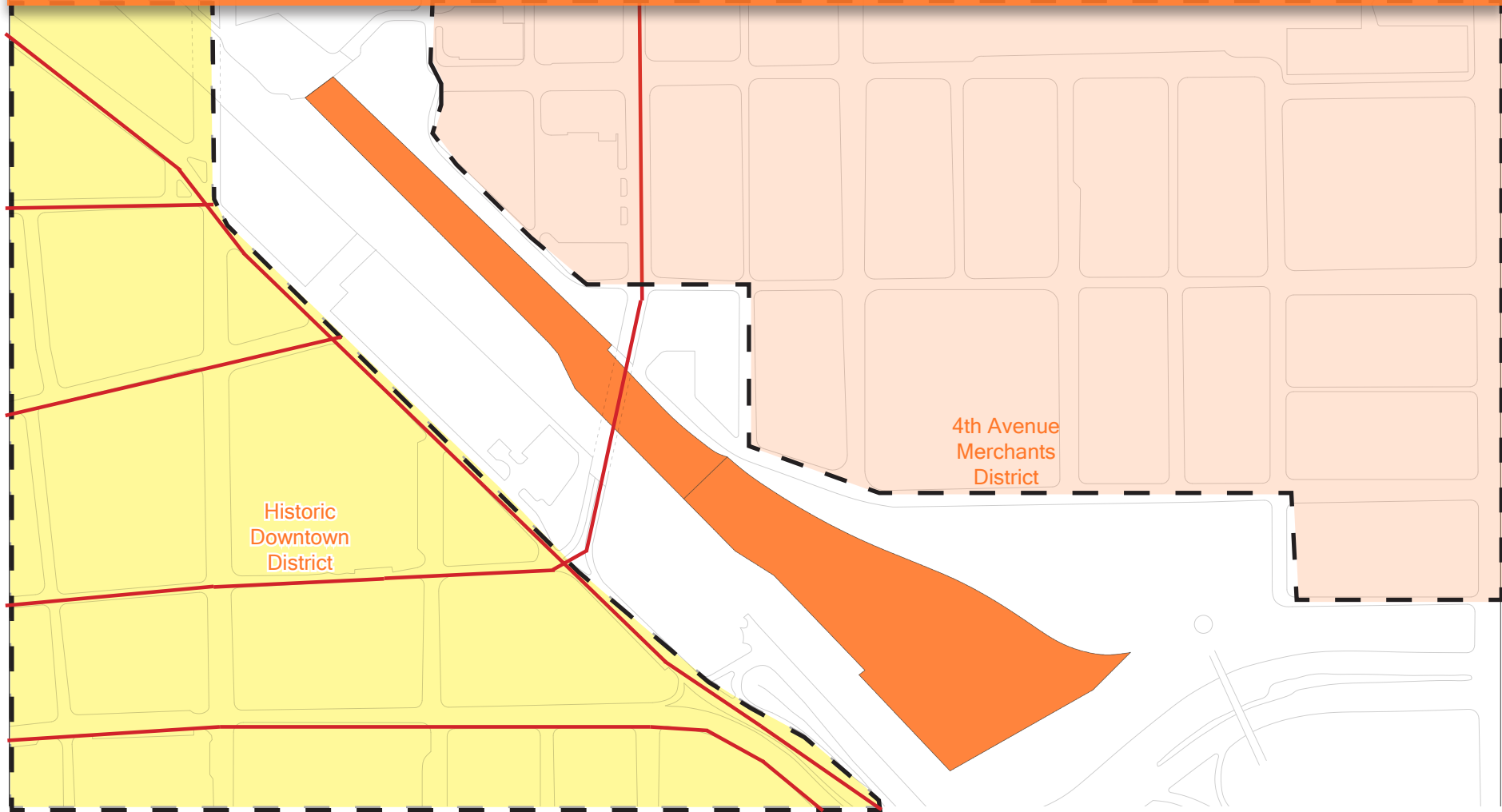
Site inventory deals with the actual findings of the site. It accounts for existing conditions of this site as well as the surrounding context. Typically site inventory is taken more than one time and the more it is taken, the more that is revealed. The repetition of multiple site visits allows for deeper phase of analysis.

Site analysis is the interpretation of the findings or inventory of the site. It is a precise and calculated set of measurements that account for size, shape, relationships, view sheds, connections and opportunities/constraints of the site as well as the literal tallying of elements that reside within its boundaries.

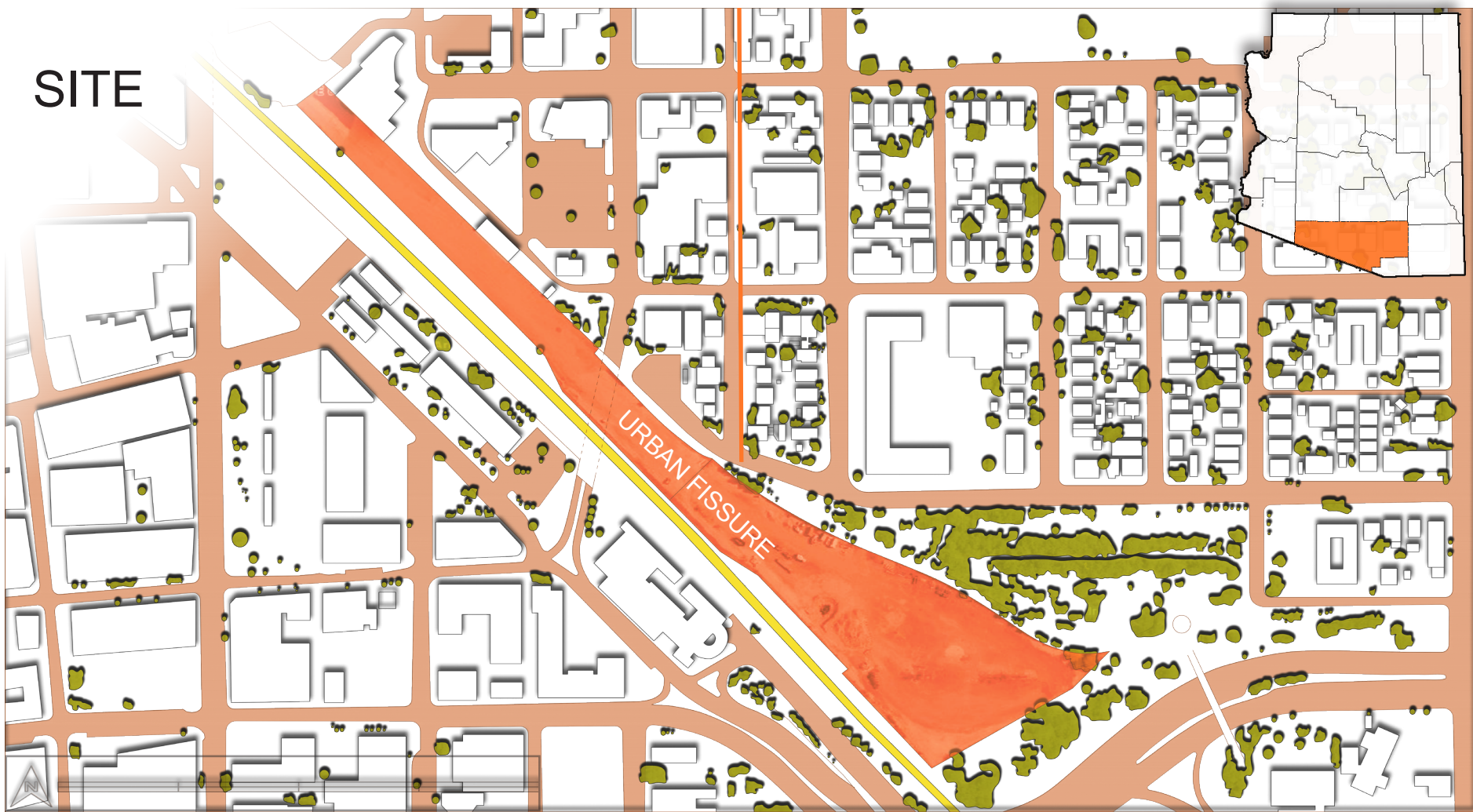
SITE LOCATION



SITE PARTI DIAGRAM



SITE



• ON SITE PHOTOS •



At Entrance Gate on
North Side of Site



Looking South



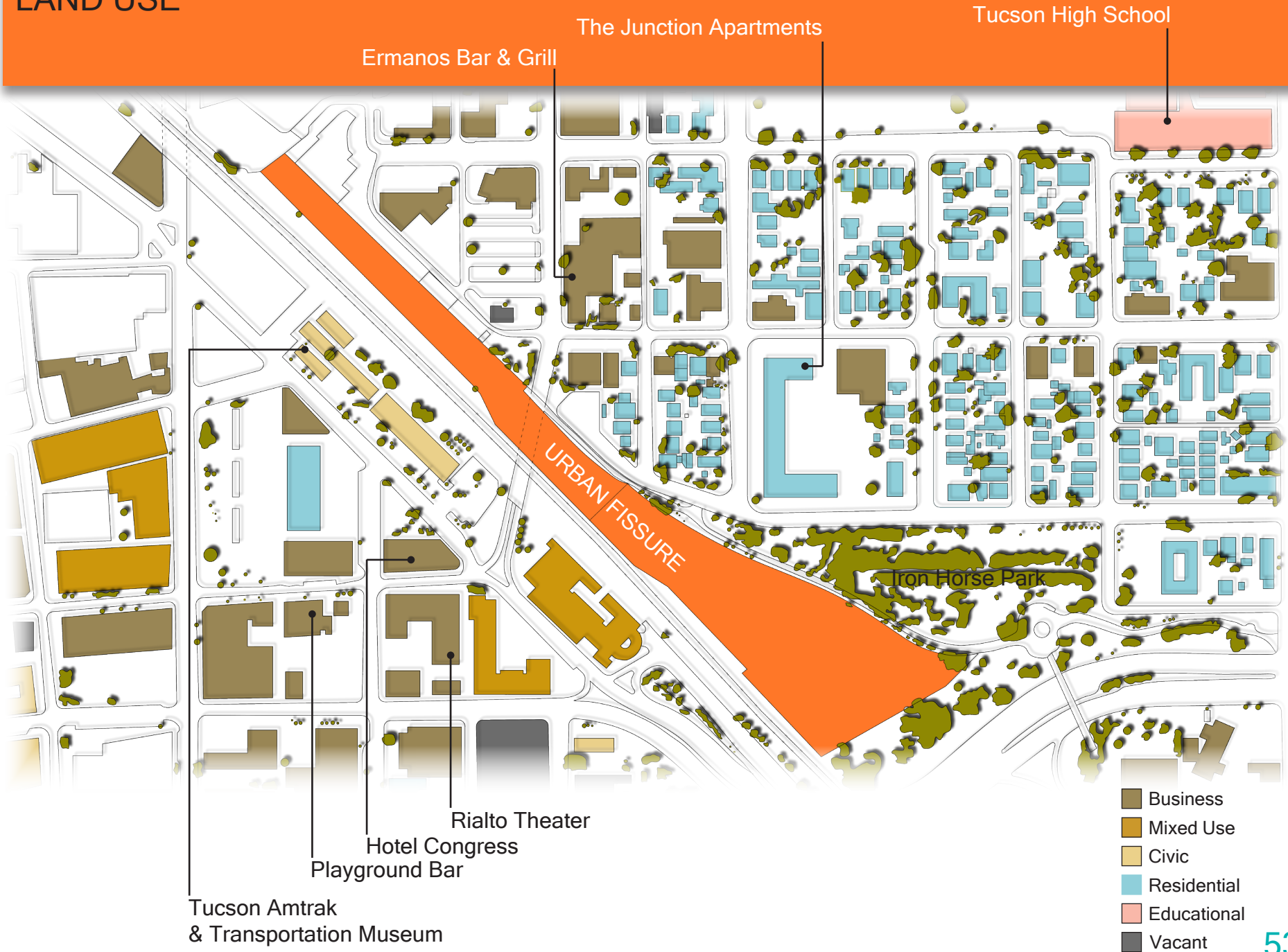
Looking North
from the Cadence



Looking West

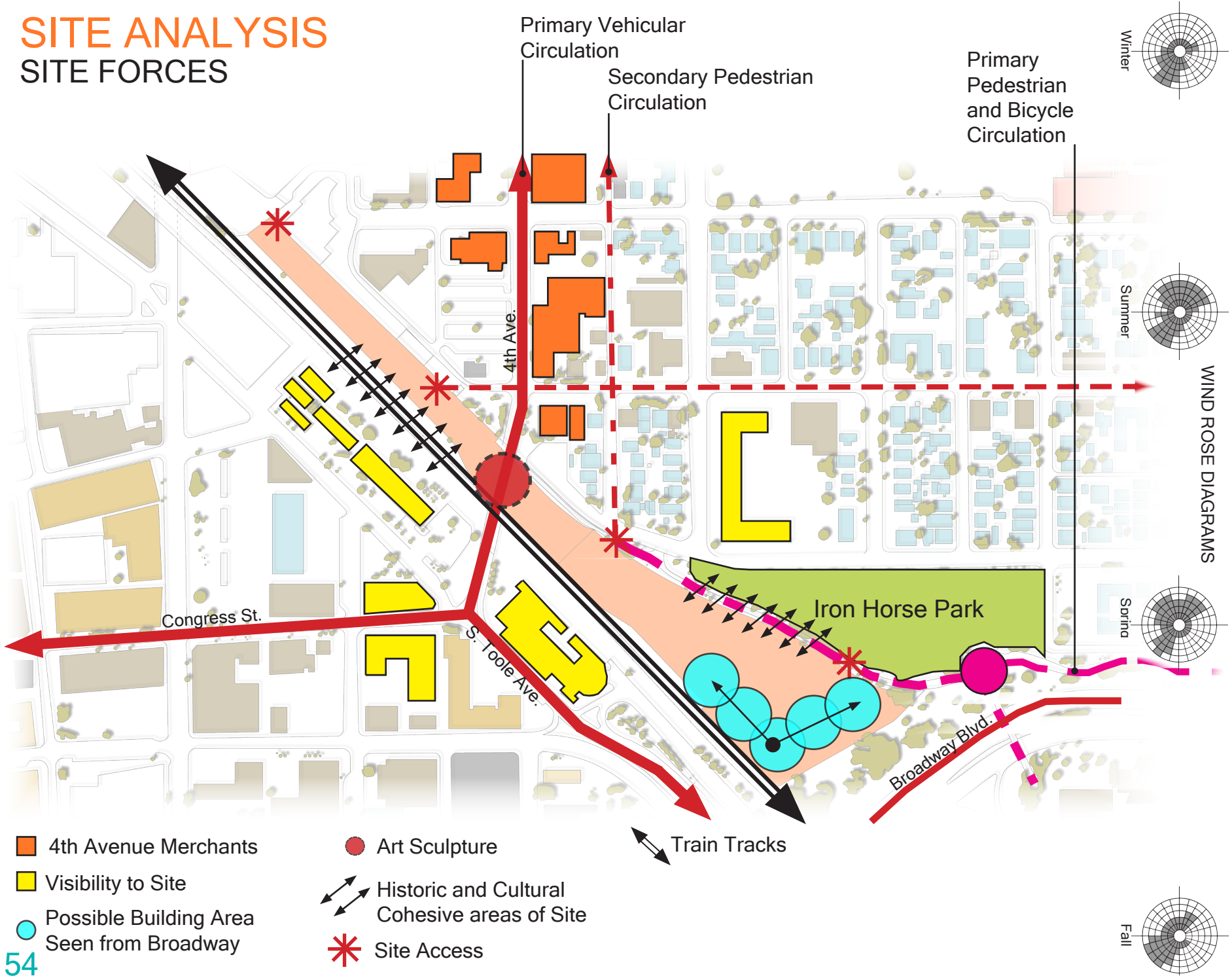
SITE CONTEXT

LAND USE



SITE ANALYSIS

SITE FORCES



DESIGN IMPLICATIONS

- Access to the site should happen through many mediums. Parking for cars, bikes, and bus drop-offs help to get a wide variety of people to the site.
- Pay special attention to how pedestrians get to the Urban Fissure. Pedestrian and bike trails should be preserved or added onto, as well ample bike parking.
- Use Iron Horse Park and 4th Avenue Plaza Park as design catalysts.
- When keeping peoples interest, the use of interactive art is a desirable element. These artistic elements add interest and whimsy to the imagination of the site.
- Make cultural connections through material expressions. Celebrate the Union Pacific Railroad by utilizing shipping container shade structures.
- Design the site in a way that promotes maximum city viewing. Views onto the site are just as important as views from the site.
- An urban park should be seen as an amenity for the city. It should allow people to do many things. To promote health, biodiversity, and social cohesion is the goal of urban parks.

DESIGN OUTCOMES

CONCEPTS

Concepts allow us to plug in multiple iterations of ideas into an existing framework. They help us understand the opportunities and constraints of the site.

For our case with the Urban Fissure, we will take a glimpse of three concepts that have different elements which allow each to become unique. We arrive at our elements come from a preliminary site analysis.

SYNTHESIS

In order to obtain the most complex and interesting final concept a synthesis of all three prior concepts are inventoried and combined.

For a synthesized approach, one or two elements from each concept was chosen to be represented in the final concept. Yet there are always refinements that must be made before a final master-plan can be visualized.

MASTER PLAN

The master plan is the final culmination of all the synthesized and elements which helps us arrive at a realization of an idea.

The refinement and precision of the master plan gives us the fullest sense of what a design could be. It gives us a real depiction of the existing site and a real look at the selected elements from the synthesized approach.

CONCEPT 1

MATERIAL EXPRESSIONS

● This concept focuses on a tactile experience through the Urban Fissure. Material Expressions revolves around the ideas that people can coexist with landscape and architecture.

● By introducing small building elements, a new watercourse, and utilizing natural vegetation, ones senses would be heightened through their time on Tucson's Urban Fissure.

● Materials such as copper, concrete, wood, stainless steel, and possibly fabric would allow these expressions to come alive.

● By focusing on a natural plant palette the aforementioned material palette would coexist if proper precautions and amounts are realized.

"I don't believe architecture has to speak too much. It should remain silent and let nature in the guise of sunlight and wind" (Ando).



Paved Interactive Experience



Articulated Artful Walking Experience



Elevated Platforms for City Viewing



Shipping Containers as a Historic Link



CONCEPT 2 BUFFERED POROSITY

This concept focuses on the landscape as construct that evokes emotional, physical, and mental security. It will strengthen peoples idea of Tucson as being a home or a very familiar and distinct place that closely resembles one such place.

“I think a successful space is where there is something to be experienced by people at many different levels. If people are looking for meaning, they will find it, but what is most important is that people enjoy it, and they are proud of it, and want to use it, and that they come to use it so often that it becomes part of who they are as citizens of the city” (Schwartz).



● DEFINING ELEMENTS

- **Natural Vegetated Buffer**, which keeps people safe from potential man made vectors.
- **Elevated Sinuous Walkway** which propagates people up, closer to the tree canopies, as well as allowing for many views of the city.
- **Shipping Container Architecture**, which links the history and culture of the Union Pacific Railroad.

- **Programmatic Breakout Spaces** below the elevated sinuous walkway paying attention to foot traffic and cyclists.
- **Synthesized movement** through all levels of the site. Paying attention to not only horizontal movement but vertical movement, with special attention to feelings of emotional, physical, and mental security.



THE HIGHLINE

CONCEPT 3

URBAN THREAD

This concept focuses on connectivity to existing urban conditions while paying close attention to site forces. The thread in this concept is realized by the curvilinear shape of the pedestrian and bike trail that traverses the site. It allows for a romantic stroll through the park, or a quick safe ride from one end to the other.

“Every citizen has had long associations with some part of his city, and his image is soaked in memories and meanings” (Lynch).

● DEFINING ELEMENTS

● Curvilinear and Straight Bike Trails system..

● Pedestrian Trails starting from Iron Horse Park.

● Pit-Stop nooks and Breakout spaces.

● Shipping Container Aesthetics.

● Man made water retention/celebration areas.

● Ordering of Vegetation to create space

● Utilize local aesthetics

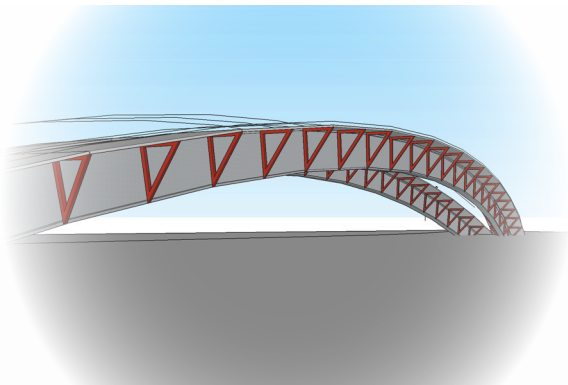
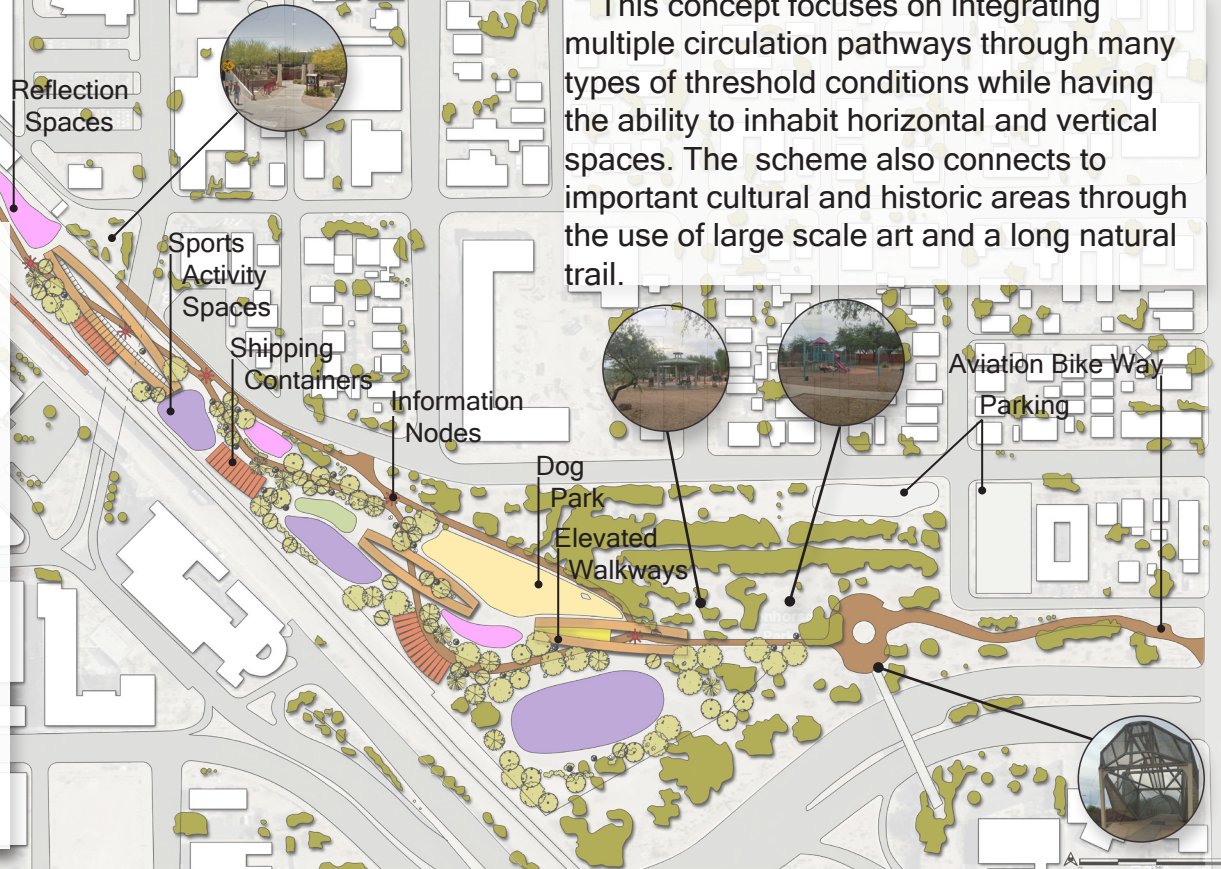
● Connect visually to both historical and cultural districts

FINAL CONCEPT CONNECTED THRESHOLDS

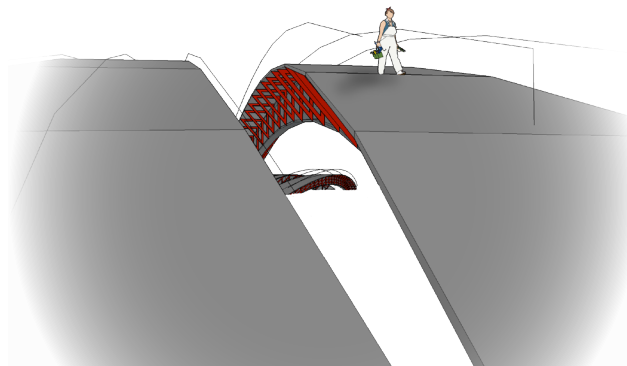
This concept focuses on integrating multiple circulation pathways through many types of threshold conditions while having the ability to inhabit horizontal and vertical spaces. The scheme also connects to important cultural and historic areas through the use of large scale art and a long natural trail.

Programme

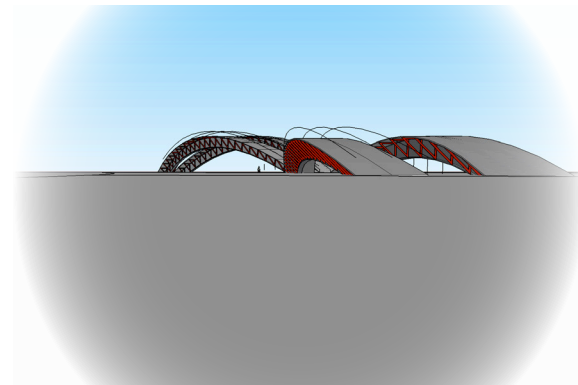
- On-site and off-site parking
- Mesquite and Palo Verde Bosques
- Reflection Spaces
- Sports Activity Spaces
 - Soccer Field
 - Basketball
- Dog Park
- Shipping Containers Shade Structures
- Elevated Walkways
- Continuous Natural Pathway
- Use of Natural Plant Palette



Approaching Iron Horse



View from the Eye



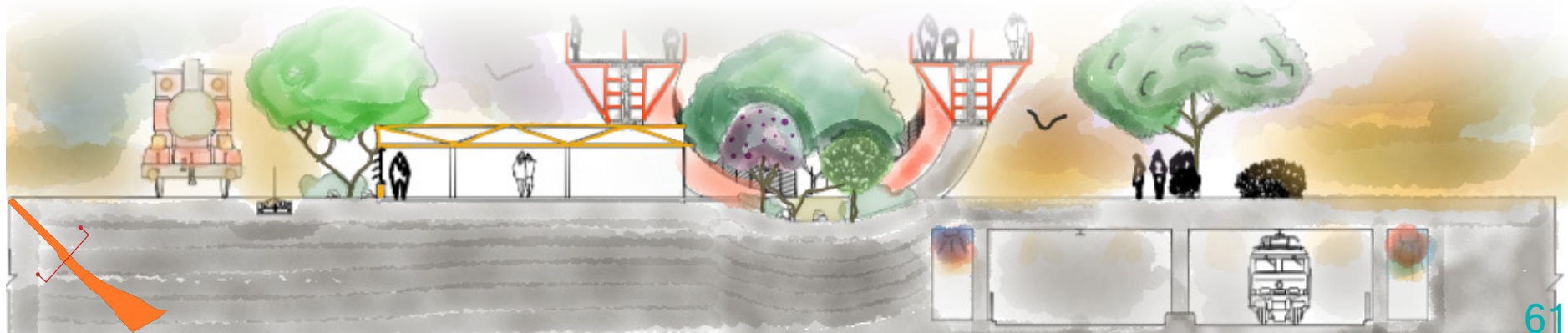
Lets Go!

MASTER PLAN

Design Outcomes

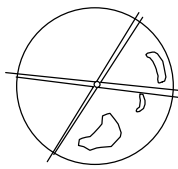
- 9 Acres of New Urban Space
- Connections to Existing Urban Fabric
- Uses Natural Hardy Vegetation
- Elevated Walkways
- Access to Covered Parking
- Large Scale Interpretive Art
- Multi-Modal Pathways
- Increased City View-Sheds
- Multi-dimensional Movement

This plan focuses on integrating the three concepts. The goal is to focus on materials for positive haptic experience, the use of vegetated buffers where activities take place for mental security, and creating strong connections to the cultural and historic districts to bridge the urban gap.

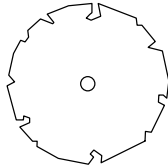




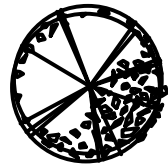
Prosopis Velutina



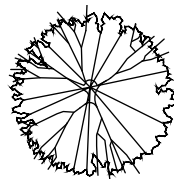
Parkinsonia x
Desert Museum



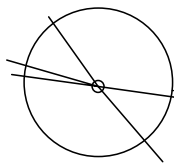
Chilopsis Linearis



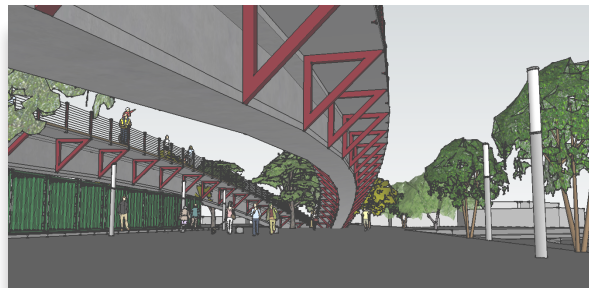
Celtis Reticulata



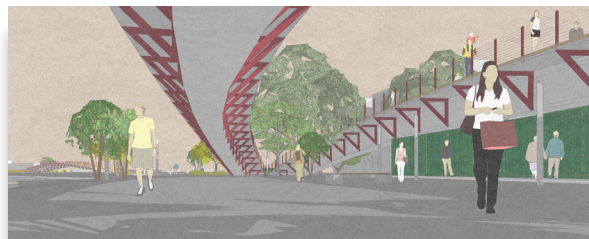
Havardia Pallens



As we begin to approach the structures we can see the native Palo Verdes and Mesquites shade the sidewalks and DG pathways, while the smaller understory bushes like the Texas Ranger, and young Oleanders provide texture, fragrance, and color.



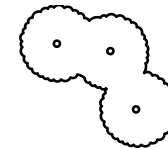
Approaching the Elevated Vesic of Pisces where the inner portion of the architected spaces receives shade almost all day.



The overall use of the vegetation keeps one's eyes moving and helps facilitate movement from one focus area to another.

VEGETATION PALETTE

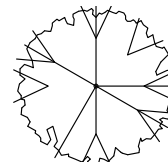
The careful selection of Hardy Plants were chosen because of the vast size of the site. These are just a few of the tree and bush types that helped with massing and shading the large expansive barren plot of land we call the Urban Fissure.



Leucophyllum
Frutescens



Nerium Oleander

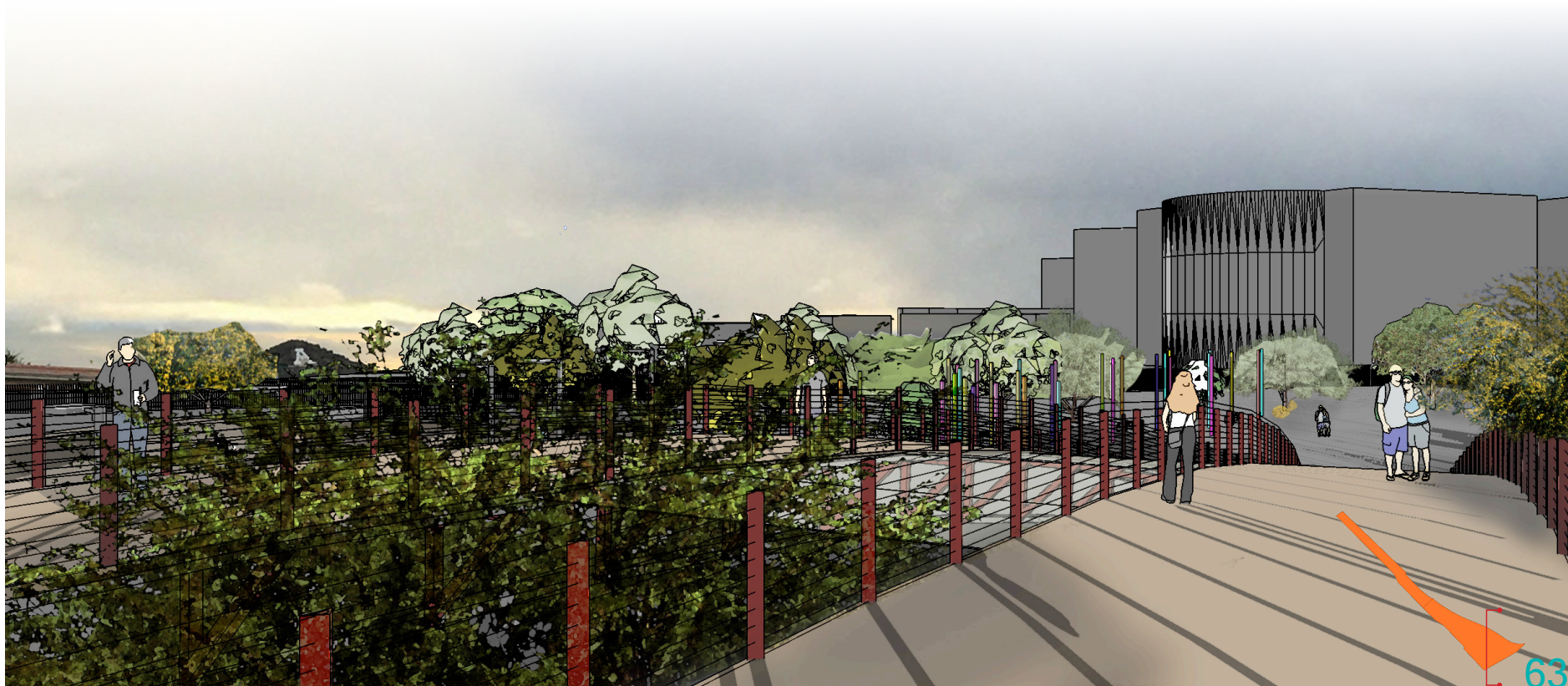


Quercus Virginiana



With the addition of new native plants and shrubs, existing visibility to important landmarks became limited if not non-existent. The addition of the elevated arcs allows us to regain those important views.
(Sentinel Peak)

The Section depicts the condition underneath the elevated arcs as well as the condition up on the arc itself. The act of vertical and horizontal movement on the site allows for maximum city viewing while still being immersed by a vegetated community.





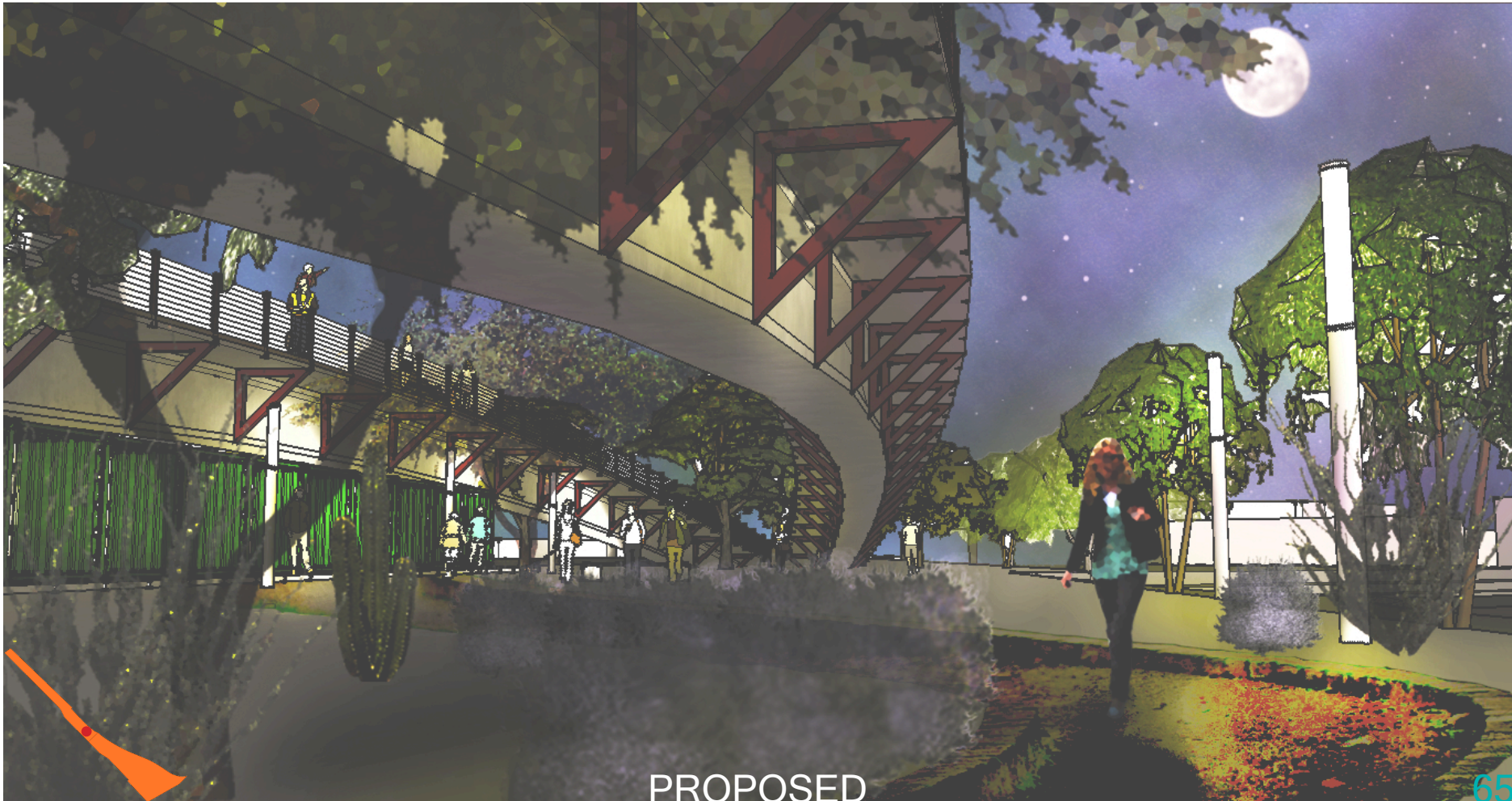
EXISTING



EXISTING



The proposed image below depicts a part of the urban fissure that is habitable on both ground plane and elevated viewing plane. While on the ground plane, we are immersed with a native aromatic, colorful, shrub and tree palette. But, while on the elevated viewing plane we are surrounded by the lush tree canopies and views of the city seem to be at an arms reach.



PROPOSED

RECOMMENDATIONS



HISTORY OF SURROUNDINGS

Culture and history should never be overlooked when approaching an urban design problem such as the one at hand. It is imperative to research, inventory, preserve, and celebrate the history that surrounds our cities.

TYOLOGY OF MOVEMENT

Movement occurs everywhere. It is how we stay in motion. Design should invoke a positive sense of movement and allow us to move in and through many different mediums. To understand movement completely we must observe it at all different scales.

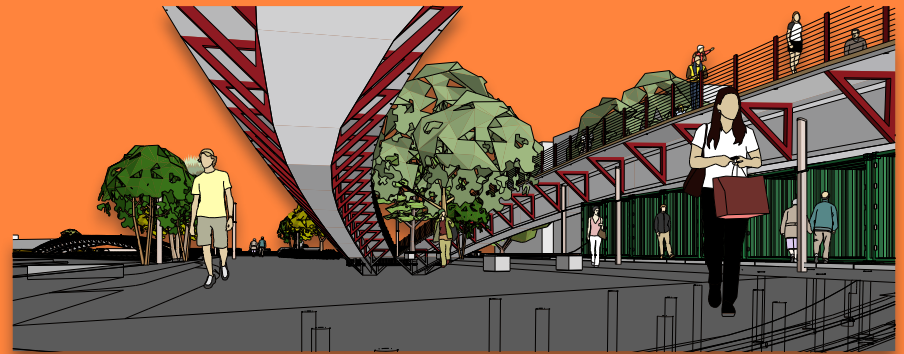
SYNTHESIZED MOVEMENT

Synthesized movement takes place when the typology of movement is fully understood. Stumbling upon, searching, discovery, and rediscovery are all parts of design which are the preferred type synthesized movement. Our goal is to give our visitors something new to look forward to when coming to our park.

URBAN PARKS

Urban parks can be seen as massive playgrounds for the city. They should try to promote health, biodiversity, and social cohesion.

Process



CONCLUSIONS

- This is just one type of proposed solution for the gap present in Tuscon's Urban Fabric.
- There is inherently much more analysis that needs to be done on the micro and macro level.
- Community level research is still needed to pin-point park typologies best suited for this urban condition.
- The integration of multiple professions would help the overall feasibility of the proposed project. No one single professional entity should be overlooked..
- Shade is absolutely essential, so the incorporation of many more rigorous, thorough site studies and calculations need to occur.
- The need to engineer the site may take the construction of this park a while to see it to completion, so phasing is necessary.



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